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ABSTRACT

Focusing on data needs and methods for manpower planning and manpower projections, this document is one in a series of six volumes reporting the results of the National Manpower Survey (NMS) of the Criminal Justice System. Chapter 1 of five chapters discusses the role and objectives of criminal justice manpower planning at different levels of government (federal, state, and local) and the major categories of information needed. Chapter 2 describes the NMS criminal justice manpower projections model, which was used as a basis for the manpower projections included in this series of reports. Projections are presented for sector employment, employment by occupation, and personnel turnover and recruitment needs in key occupations. The procedures for maintaining and updating the model at the national level are included in Chapter 3 along with an identification of major data sources. Chapter 4 presents the applications of these procedures to manpower planning at the state level and includes a review of experience in a collaborative survey effort with the North Carolina State Planning Agency. Finally, conclusions and recommendations concerning measures to improve both federal and state-level criminal justice manpower planning are presented in Chapter 5. The survey procedures, based on the North Carolina prototype survey, and the detailed programming procedures for updating the NMS survey as well as a description of the model are appended. (BM)

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The National Manpower Survey of the Criminal Justice System

Volume Six
Criminal Justice Manpower Planning

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
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FOREWORD

The criminal justice system is a labor-intensive enterprise, vital to the nation and beset with manpower problems. One of the most recent attempts to help alleviate some of the problems was the National Manpower Survey. The Congressional mandate for this survey was written in 1973, the survey was begun in 1974 and completed last year.

This volume deals with data needs and methods for manpower planning and manpower projections. Methods for developing and maintaining a data base are discussed and a model for making projections is presented.

The survey results do not provide final answers to all of the manpower issues. In particular, the assumptions built into the model for projecting manpower requirements may have to be modified in light of additional experience. Nevertheless, the Institute believes the study represents a significant advance in the tools available to deal with manpower problems. We hope it will be of value to the many hundreds of state and local officials who must plan for manpower needs.

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PREFACE

The National Manpower Survey of the Criminal Justice System is an LEAA-funded study conducted in response to a Congressional requirement, under the 1973 Crime Control Act, for a survey of personnel training and education needs in the fields of law enforcement and criminal justice, and of the adequacy of federal, state, and local programs to meet these needs.

This volume on Criminal Justice Manpower Planning assesses the requirement for, and current status of, criminal justice manpower planning at the federal and state agency levels; it provides a detailed description of the methods used in developing national projections of criminal justice manpower, recruitment and training needs in key occupations, and it describes the procedures for data collection and model updating, for application at either the national or state levels. It also includes a number of specific recommendations for improvement of both federal and state-level manpower analysis and planning for the criminal justice system. Three technical appendices to this volume include: (a) a detailed description of the theory and methodology used in the projections; (b) a User's Guide for the NMS Criminal Justice Manpower Model; and (c) a description of manpower survey procedures and methodology, based upon experience in a demonstration survey project, undertaken in cooperation with the North Carolina State Planning Agency.

The six volumes published under this study are:

Volume I - Summary Report

Volume II - Law Enforcement

Volume III- Corrections

Volume IV - Courts

Volume V - Criminal Justice Education and Training

Volume VI - Criminal Justice Manpower Planning

ACKNOWLEDGEMENTS

This volume is the product of a cooperative effort by staff of two research organizations, the National Planning Association and the Bureau of Social Science Research, as well as the North Carolina state planning agency.

One of the central tasks of the National Manpower Survey was the development of a methodology for projection of criminal justice manpower and its application, to generate projections of employment and recruitment needs by sector and occupation. The result of this effort was the development of a fully integrated model covering all sectors of the criminal justice system, and including projections of crimes, arrests and imprisonments, as well as the required manpower outputs. This model and the resulting projections as described in Chapter II and in Appendices A and B, were developed by Mark Kendall and Linda Harris of the NPA staff.

Another essential task of the project was the design of survey procedures and instruments which could be readily adapted for future criminal justice manpower data collection efforts, at either the national or state levels. For this purpose, a cooperative "prototype" manpower survey was undertaken, jointly with the state planning agency of North Carolina. Gloria Hamilton of the Bureau of Social Science Research was primarily responsible for the NMS role in this unique demonstration project, and prepared the resulting survey procedures handbook included in Appendix C of this volume. This project was made possible by the support and active involvement of officials and staff of the Law and Order Section of the North Carolina Department of Natural and Economic Resources, headed by Donal R. Nichols, and of other collaborating agencies, as identified in Appendix C.

Harold Wool, of the National Planning Association, was primarily responsible for the preparation of the text of this report, other than the technical appendices.

We owe special appreciation to the members of a technical advisory panel who advised NPA staff at the early stages of our model design efforts. These included Albert Blumstein, Saul Gass and Richard Sparks. Needless to add, none of the latter can be held accountable for any of the shortcomings of the NMS model or related projections.

The following additional members of NPA research and administrative staff also made major contributions to the successful completion of this report: Albert Gillespie, Robert Kramer, Elizabeth McGovern, Violet Barnes, Phillip Alperson, Jacqueline Rupel, Margaret Takenaka and Cynthia Payne.

CHAPTER I. CRIMINAL JUSTICE MANPOWER PLANNING

A. INTRODUCTION

Manpower planning, when viewed from a management perspective, can be defined as a process for systematically determining the number and categories of personnel required to achieve program objectives and for development of policies and programs for recruitment, training, compensation and utilization of personnel--to assure that the organization's manpower needs will be met. The need for comprehensive manpower planning is typically associated with large organizations or systems, employing substantial numbers of specialized personnel, whose recruitment and training require significant resource investments. It is particularly critical when these organizations have experienced--or have reason to expect--difficulties in recruitment or retention of a sufficient supply of qualified personnel in the absence of such planning.

These conditions have been present in the complex of agencies and functions referred to as the Nation's "criminal justice system":

(1) As documented in other volumes of this report, all categories of law enforcement and criminal justice agencies have experienced rapid recent employment growth in response to the explosive growth in crime rates and related workloads. This growth has been accompanied by significant changes in organizational structure and programs and methods of operation, and by related changes in qualitative personnel requirements.

(2) In addition to difficulties experienced by many of these agencies in recruitment and retention of sufficient numbers of personnel in recent years, there has been a growing recognition of the need to upgrade the

education and training of personnel in key law enforcement and criminal justice occupations. This need has been identified in a series of major policy-level assessments of the criminal justice system over the past decade and is further documented in the present study.

(3) In response to this need, the Federal Government has made extensive outlays for training and academic assistance programs for law enforcement and criminal justice personnel. Estimated expenditures for these purposes under the Safe Streets Act exceeded $80 million in FY 1975. Moreover, if allowance is made for outlays under other federal training and educational programs, including those of the Veterans Administration and the FBI, we estimate that aggregate federal expenditures for criminal justice education and training, by all agencies, approximated $225 million in FY 1975. These expenditures are in addition to the substantial outlays of state and local governmental agencies for training of their law enforcement and other criminal justice personnel.

Despite these large-scale expenditures, no concerted effort at systematic manpower planning for the criminal justice system had been initiated prior to the National Manpower Survey, at either the federal or state levels. A number of earlier assessments, such as those prepared for the Joint Commission on Correctional Manpower and Training (1969), had documented personnel and training needs in particular sectors or for particular categories of personnel. But all of these studies were handicapped by an inadequate existing data base, by inadequate time or resources to conduct the comprehensive new surveys needed, and by the absence of a systems-wide approach to projection of future personnel and training needs.

The National Manpower Survey of the Criminal Justice System reflected a recognition by the Federal Government of this need for a comprehensive manpower planning approach. The Congressional mandate for this study, and its further development by LEAA staff with the National Planning Association, provided for extensive data collection and analysis with respect to both current and projected criminal justice personnel requirements and resources and to training and education programs for such personnel. A specific objective of the study, as defined in the contract between LEAA and the National Planning Association, was to "enhance law enforcement and criminal justice personnel development planning at federal, state and local levels." For this reason, the contract provided for development of a methodology which would permit the periodic updating of the analyses and projections developed for the National Manpower Survey, including methods for "systematic collection and processing of required data and for prediction models and methods for arriving at revised projections."

The present volume is designed to fulfill this major aspect of the study mandate. This chapter discusses the role and objectives of criminal justice manpower planning at different levels of government--federal, state and local--as well as the major categories of information needed. Subsequent chapters describe: (1) the NPA criminal justice model, which served as a basis for the manpower projections included in the report; (2) the procedures for maintaining and updating the model at the national level, including an identification of major data sources; (3) the applications of these procedures to manpower planning at the state level, including a review of experience in a collaborative survey effort with the North Carolina State Planning Agency; and (4) conclusions and recommendations concerning measures to improve both federal and state-level criminal justice manpower planning. The survey procedures, based on the North Carolina prototype survey, and the detailed programming procedures for updating of the NPA survey, are described in technical appendices to this volume.

B. DATA NEEDS FOR CRIMINAL JUSTICE MANPOWER PLANNING

Systematic manpower planning entails significant costs in terms of data collection and analysis. These costs vary, depending on the scope and frequency of the planning effort, the extent of disaggregation of desired outputs (by geographical area, category of personnel, occupations, etc.), and the desired reliability of the resulting data. An organizational commitment to a manpower planning function should, therefore, be based on a management judgment that certain types of manpower data are needed for program and policy decisions, and that use of the resulting findings can be "cost-effective," i.e., that the potential economies, or efficiencies, in resource allocations will more than offset the costs of the manpower planning process itself. This implies, too, that the reliability, scope, frequency and level of detail of manpower data should be sufficient for use in decision-making at a given level of government (e.g., LEAA), but no more frequent or detailed than needed.

For this reason, our point of departure in development of procedures for use in manpower planning has been an attempt to: (1) define the relevant manpower planning needs--or potential uses of such data--at each governmental level; and (2) to define the types of information needed for manpower planning.

1. The Federal Role

The federal role, in relation to meeting the manpower needs of state and local law enforcement and criminal justice agencies, derives broadly from the responsibilities of the government to "establish justice" and to "insure domestic tranquility," as stated in the Preamble to the Constitution and, more specifically, from the Omnibus Crime Control and Safe Streets Act of 1968, as amended--the authorizing legislation establishing the LEAA. While reaffirming "that crime is essentially a local problem," it provides for financial and technical assistance to state and local governments for criminal justice planning; for development of new enforcement and criminal justice techniques and procedures; and, more generally, for the purpose of increasing the effectiveness of state and local criminal justice agencies. Such assistance is provided both in the form of block grants to states, subject to development of comprehensive state plans, and through direct administration of "discretionary" or other grant programs, for such purposes as training, education, research, and development.

With respect to manpower, LEAA programs have been directed primarily towards upgrading the quality of personnel in state and local agencies through a variety of training and academic assistance grants—including those directly administered by LEAA, such as LEEP, and those provided by state agencies from Part C and Part E block grant funds. In addition, the LEAA is responsible for enforcing fair employment practice provisions with respect to any programs or activities funded, in whole or in part, under the Safe Streets Act.

The statute specifically limits the amount of state grant funding allocable for compensation of "police and other regular law enforcement and criminal justice personnel" to no more than one-third of any grant, with the exception of personnel engaged in training programs or in research, development or other short-term programs (Section 301). Nevertheless, LEAA grants have made significant contributions to initial staffing of a wide range of innovative projects and activities, in addition to those specifically related to training, research, and development.

As a result of its program emphasis upon personnel upgrading, LEAA funding has played a major role in provision of financial support for criminal justice higher education programs, as well as for certain categories of training programs which had previously received limited support at the state and local levels--notably for correctional and courts-related personnel. These grants have been in the form of direct tuition assistance or student loans, as in the case of the LEEP program, or have been designed to improve training and educational institutional resources. In either case, these have required policy decisions concerning: (1) the aggregate level of program funding for training and educational purposes; and (2) allocations of the available funds among various categories of educational and training programs, among various target groups (by sector or occupation), among various types of institutions, and among the regions or states.

The initiation of these programs had required, initially, a body of information concerning the educational and training status of personnel in key law enforcement and criminal justice occupations, as well as standards or criteria concerning the amount and types of education or specialized training needed for effective job performance. Previous national-level studies, including those of the President's Crime Commission, the Joint Commission on Correctional Manpower and Training and the National Advisory Commission on Standards and Goals, had resulted in essentially consistent recommendations concerning the need to upgrade the educational level and training of personnel in the "line" law enforcement and correctional occupations, and had also documented the need to expand the specialized training of professional personnel, such as lawyers. Although the statistical data base available for arriving at those judgments was limited, the gap between actual and desired levels of education and/or training appeared to be sufficiently great to policy makers in both the Executive and Legislative Branches, to justify a substantial financial commitment on the part of the Federal Government to training and academic assistance programs in these fields. Thus, the existence of some form of "base level" assessment and of a set of prescriptive standards or objectives for personnel upgrading preceded, and was a necessary condition for, the initiation of these programs.

a. Current Manpower Needs and Resources

One of the principle objectives of the National Manpower Survey has been to provide a more comprehensive data base, at the national level, to aid in assessing the current adequacy of manpower staffing and of training and academic assistance programs, and to establish priorities among future claimants for such assistance. An initial phase of this study included the identification of the categories of information considered relevant to such an assessment and the development of plans for collection of such data from either existing data sources, including ongoing surveys, or from new data collection efforts. Generally, this included comprehensive information, both quantitative and qualitative, concerning jobs in criminal justice agencies, personnel employed in these jobs, and specialized training and education programs designed to develop the skills and knowledge needed for effective job performance. More specifically, the following categories of data were identified, as shown in Table I-1.

- Employment and turnover statistics
- Agency expenditure and workload data
- Job characteristics data
- Personnel characteristics data
- Training and education program data
- Opinions of criminal justice agency executives and other experts concerning manpower and training needs and related issues.

TABLE I-1

ILLUSTRATIVE MATRIX OF DATA NEEDS FOR CRIMINAL JUSTICE MANPOWER PLANNING, BY AGENCY CATEGORY

Type of Data ·By agency type ·By personnel category ·By occupation ·By region/state/area	Federal (LEAA)	State Planning Agencies	State Training Standards Agencies	State and Local Operating Agencies	Training Academies	C/J Educational Institutions	State and Local General Governments
I. Employment and Turnover							
Actual employment							
Job vacancies							
Personnel turnover							
Projected employment and recruitment							
II. Agency Expenditures and Workloads							
Total expenditures							
Personnel expenditures							
Training expenditures							
Selected workload statistics							
III. Job Characteristics							
Salaries							
Fringe benefits							
Hours							
Entry standards							
Occupational task analyses (key occupations)							
IV. Personnel Characteristics							
Age, sex, race/ethnic background							
Educational attainment							
Extent of entry-level and other specialized training							
Current enrollment status in T&E programs							
Length of service							
V. Training and Education Programs							
Number and type of institutions							
Programs and courses							
Enrollments and graduates							
Funding sources, e.g., LEEP							
Faculty characteristics							
Student characteristics							
Student placements							
VI. Executive and Other Expert Opinions							
Agency manpower plans/needs							
Agency training and education plans/needs							
Opinions on selected personnel policy issues							
VII. Employee Opinions							
Assessments of training and education received							
Career plans and attitudes							
Job satisfaction							
Opinions on selected personnel policy issues							

- Opinions of employees of criminal justice agencies concerning adequacy of training received, career plans, job satisfaction, and personnel policy issues.

In almost all instances, such data were needed for each of the major sectors, or types of agencies, within the criminal justice system, usually further classified by jurisdiction (e.g., state, county, city), and by agency size. Data with respect to employment and turnover, job characteristics, personnel characteristics, training or education programs, and employee opinions or attitudes, were required separately by major personnel category, (e.g., sworn vs. nonsworn employees, in law enforcement agencies), and by occupation or duty position. Further, although the focus of the National Manpower Survey was on a broad national-level assessment, some further disaggregation of this information by region or size of community served was also considered essential.

The surveys and field visits conducted by the National Manpower Survey, supplemented by intensive analysis of existing data sources, resulted in a relatively comprehensive collection of data on all of the above subjects, with the exception of data on "opinions of criminal justice employees." Initial plans had provided for direct sample surveys of employees in key criminal justice occupations to obtain information on both employee characteristics and employee attitudes towards their jobs and training. However, the initiation of such a survey did not prove feasible in view of the fact that a separate "employee characteristics" survey had been concurrently initiated by the Census Bureau, under LEAA funding, which included most of the desired information on personnel characteristics, but which did not include information of an attitudinal nature. Partial information of this type was collected, however, from small samples of employees in the course of field visits to agencies in 10 states, as described in Volume VIII of this Report.

b. Manpower Projections

Investments in specialized training and education necessarily entail some judgments as to future, as well as current, personnel and training needs. These will be affected by trends in employment and in personnel turnover, and by changes in the educational and training background of personnel entering or remaining in these occupations. To the extent that these trends can be reasonably anticipated for a period of years ahead, they can--and should--influence decisions concerning training and educational assistance.

For this reason, in major legislation on training and education assistance programs, the Congress has explicitly directed that future manpower needs be considered in the design of such programs. For example, in the Vocational Education Amendments of 1968, the purposes of the Act included the objective of assuring access to vocational training or retraining *"which is realistic in the light of actual or anticipated opportunities for gainful employment"* (emphasis added).[1] Similarly, the statutory authorization for the National Manpower Survey provided for a survey of *"existing and future personnel needs"* (emphasis added) in the field of law enforcement and criminal justice, and of the adequacy of existing programs to meet such needs.[2]

The following national-level projections were developed by the National Manpower Survey for this purpose:

- projected employment by occupation for each major category of law enforcement and criminal justice agency;
- projected entries into these occupations, allowing for both anticipated replacement needs and employment growth;

- projected requirements for entry-level training in selected key occupations, based on existing or proposed training standards.

The outputs from these projections thus provide a basis for assessing the differential rates of growth in training or educational needs, by occupation, and the relationship between these requirements and existing training or education program resources and outputs. The methods and assumptions used in arriving at these projections are described in the following chapter. In the present context, it should be noted that the NMS study design provided for development of these projections at the national level only. These could meet the data needs for LEAA policy and program assessments at the national level, but not necessarily for more detailed planning and operational decisions at the state and local levels.

2. State Planning Agencies

The Omnibus Crime Control and Safe Streets Act of 1968, as amended, provides that all states wishing to participate in financial assistance under Title I of the Act are required to "develop. . . a comprehensive statewide plan for the improvement of law enforcement and criminal justice throughout the state."[3] States are allocated funds to establish "state planning agencies" (SPA's) to design and implement the plans. A minimum annual planning grant of $200,000 is given each state, with additional funding based on relative population.

As a result of this incentive, all states have established SPA's by action either of the governor or state legislature. These have been supplemented by a network of 456 intra-state regional planning units and by a number of local area criminal justice coordinating councils.[4]

All SPA's have at least two broad categories of responsibilities: (1) the preparation of Comprehensive State Plans, as prescribed by LEAA; and (2) the administration of Safe Streets Act block grants for their states. In principle these two functions are closely linked: the state plan is designed to provide the vehicle for defining needs and establishing program priorities; the block grants, in turn, provide the financial resources for accomplishment of priority projects and programs. In addition, the state planning agencies, to varying degrees, may be utilized for broader state level planning, budgeting, and legislative functions, other than those directly related to administration of the Safe Streets Act.

The criminal justice planning role of the SPA's is of particular interest in the present context. This has been influenced, in large part, by LEAA guidelines specifying the form and content of state plan submissions. LEAA first issued guidelines for state criminal justice plans in 1968 and has refined the original guidelines in subsequent issuances. The detailed guidelines for the 1976 planning cycle, issued in 1975, require generally that all plans include the following elements:

- an assessment of the current system, including an analysis of the problems faced by law enforcement and criminal justice agencies and resources available to these agencies;
- the formulation of standards and goals for these agencies;
- a description of the plans and programs to be undertaken by the state, both immediate and long range, including the organizational systems, administrative machinery and resources needed to implement the plan.

Although manpower planning is not identified as a separate component of the state plan submission, the LEAA guidelines for submission of Comprehensive State Plans do include a number of specific references to manpower and personnel data requirements.

Section 1 of the Plan, describing existing law enforcement systems and available resources, includes a requirement for statistics, by agency and type of position, on:

- numbers of persons employed,
- educational level,
- training level,
- minimum entry level requirements,
- length of service,
- salaries,
- age characteristics,
- turnover rates.

Information is also requested on agency workloads and on current personnel policies with respect to recruitment, selection, promotion, incentives, and retention.

Section 2, describing the State's Multi-Year Plan, includes a requirement to address the manpower training needs as well as the physical resources necessary to achieve the specific goals established in the Plan.

Section 3, describing the Annual Action Program for use of its block grant funds, includes requirements for estimates of manpower and training and education needs in support of the proposed projects. In the case of training and education programs, information on course length and content is also required.

Although a considerable body of manpower data is requested, there is no specific requirement in these guidelines for a comprehensive "base-level" assessment of manpower and of training and education needs of state and local criminal justice agencies. References to future personnel, training or education needs generally relate to specific requirements associated with particular action programs or "goals."

Moreover, analysis of a sample of the state plans actually submitted for 1976 has indicated that few--if any--of these plans have systematically complied with all of the pertinent LEAA guidelines. For this purpose, manpower planning specialists in LEAA regional offices were asked to nominate two state plans in their regions for analysis, including one ranked "above average," and one ranked "below average," in terms of the quality of its manpower data. Six of these state plans were selected for detailed analysis, including three "above average" and three "below average" plans. Although these cannot be considered a representative sample of all state plans, the results of this small scale analysis appear consistent with our more general inspection of a much larger number of plans and with information obtained from meetings with SPA administrators and staff. Its major findings are summarized below.

(1) Data on Existing Resources--None of the six state plans fully complied with the LEAA guideline specifications in providing comprehensive statistical data and related information on personnel and workloads in the state's law enforcement and criminal justice agencies. As shown in Table I-2 data were more complete with respect to police personnel and workloads than for other sectors. However, even for police agencies, only three of the six plans included any statistics on race and age, or on personnel turnover. Comprehensive data on the extent of training received by personnel was included for police in only three of the state plans, for corrections and courts sector personnel in only one of the state plans, and in none of the plans for personnel in juvenile service agencies. Generally, smaller, more rural states in the group analyzed tended to provide somewhat more complete data than larger states, possibly due to the greater cost and difficulty of obtaining comprehensive statistics for the latter states.

(2) The Multi-Year Plan--The intent of the LEAA guidelines for this

TABLE I-2

ANALYSIS OF MANPOWER DATA INCLUDED IN SIX STATE CRIMINAL JUSTICE PLANS, 1976*

Subject	Number of Plans with Required Data							
	Police		Courts		Corrections		Juvenile Services	
	Complete	Partial	Complete	Partial	Complete	Partial	Complete	Partial
Persons Employed	5	1	2	3	3	1	2	2
By Type of Position	2	2	1	3	2	2	0	2
Education Levels	3	1	3	0	1	2	0	1
Training Levels	3	1	1	0	1	3	0	1
Length of Service	1	0	2	0	2	0	0	1
Salaries	2	1	1	2	0	1	0	1
Race/Ethnic Composition	2	1	1	0	1	0	0	0
Age Characteristics	2	1	2	0	1	0	1	0
Turnover Rates	3	0	0	0	1	0	0	0
Any Workload Data	4	2	2	4	3	1	1	2
a. Personnel/Offenders	0	0	0	0	0	0	1	0
b. Personnel/Population	4	0	0	0	0	0	0	0

*Based on analysis of state plans for Georgia, Indiana, Maryland, Montana, Oklahoma and Utah.

section is clear. Each state must present a "thorough, total and fully integrated analysis" of crime trends and system deficiencies. Goals, standards, and priorities for system improvement must be developed and a comprehensive plan to solve problems and achieve goals over the long term must be prepared.

Although nearly all states reported some data on overall crime rate trends and on characteristics of offenders, analysis of these trends and their implications was generally limited. The presentation of state standards and goals was also uneven in the six plans analyzed, presumably reflecting uneven progress in development and approval of such standards and goals at the time of preparation of the 1976 plans. However, some standards relating to police and correctional training appeared in each of the plans.

Three of these multi-year plans contained quantified manpower, training, and education components, including data on numbers of individuals to be trained or recruited, number of hours of training by type of training, and educational levels of personnel. However, little if any information was included on the method of arriving at these estimates or projections, such as data on the relationship of training and educational goals to tasks performed or to performance objectives.

(3) Annual Action Programs--An analysis was also made of a number of the annual action programs or projects in each of the six state plans. Almost all of the specific training projects reviewed had some quantified targets, such as number of personnel to be trained. However, in the case of action projects not specifically addressed to training or education objectives, quantitative assessments of the manpower and training required to implement the programs were generally lacking. The results of the analysis of these Annual Action Programs are summarized in Table I-3.

TABLE I-3

ANALYSIS OF TYPES OF INFORMATION INCLUDED IN ANNUAL ACTION PROGRAMS OF SIX STATES, 1976

Type of Information	Plans Containing Information Often or Where Appropriate	Plans Containing Information on Occasion
1. Problems Addressed		
a. Crime reduction oriented	3	0
b. System-capabilities oriented	6	0
c. Manpower oriented	4	1
2. Problem Outlined Earlier in Multi-Year Plan	2	0
3. Relation to Standards and Goals Stated	4	1
4. Relationship to Multi-year Plan or Overall C.J. System Stated	1	1
5. Support Data Provided		
a. Manpower needed for implementation	1	3
b. Training/education needs of personnel for specific projects	0	0
c. Offenders and others affected by program	2	2
d. Training/education curriculum	1	0
e. Number of training/education hours/years	2	1
f. Numbers explained or justified	0	0
6. Evaluation		
a. Quantified targets	5	0
b. Specific implementation time	4	0

The uneven development of comprehensive criminal justice manpower planning by the states, as reflected in their most recent plan documents, is attributable to several closely related factors:

- The limited role of the SPA's in decision-making on overall resource allocations among state and local law enforcement and criminal justice agencies.

The Advisory Commission on Intergovernmental Relations in its recent 10-state survey found that:

> . . . in establishing the SPA's in 1968, no governor gave the SPA authority to conduct comprehensive planning for all state criminal justice needs. This remains the case today, with the exception of Kentucky. Thus, the annual plans developed by the SPA's have far less meaning for the State criminal justice system than the annual State budget documents which indicates the allocation of all State criminal justice resources.[6]

Since the comprehensive statistics on manpower and workloads requested in the Annual Plan submission lack a programmatic context in many states, such data requirements have often been treated in perfunctory fashion.

- Inadequate SPA staff resources.

A total of 1,425 full-time professional staffs were employed by the SPA's in 1975, an average of less than 30 per state. Based upon the functional distribution of SPA budgets, it is likely that only about one-fourth of these personnel are assigned to planning activities of all types, with the remainder engaged in such activities as grants management, project promotion, monitoring, evaluation, and related management or administrative tasks.[7] SPA's, particularly in the smaller states, often have no staff specialist who is assigned solely to the manpower aspects of criminal justice planning and program review. They have been handicapped, too, by high turnover among SPA directors, whose tenure has averaged approximately two years. Hence, the professional staff resources and continuity of leadership necessary for development of a manpower planning function has been lacking in many agencies.

- Inadequate manpower data.

The limitations of the manpower data included in the annual submissions, as illustrated in Table I-1, are both a cause and symptom of the inability of most SPA's to engage in comprehensive manpower planning. For example, the establishment of realistic standards and goals on the amount of entry-level or in-service training to be provided to personnel in key criminal justice occupations requires, to begin with, some information on the numbers of such personnel actually employed and on their current educational and training status--as well as on the amount and types of training considered necessary for adequate job performance. Although a number of state agencies had partial data of this type, none of the states whose plans were reviewed or which were contacted in the course of NMS surveys, had an ongoing system which provided such information on a routine basis for all major relevant categories of agencies and occupations. Such information was more likely to be available with respect to state--as distinct from local--criminal justice agencies. It could be obtained from local agencies, such as local police departments or county sheriffs' agencies, only at considerable cost and through the voluntary cooperation of the latter agencies. Thus, even when SPA staff resources for initiation of a comprehensive manpower planning function were present, the absence of essential data--and of the needed system for collection of such data--were major obstacles to effective manpower analysis and planning.

There are obvious exceptions to the above generalizations. A number of SPA's are assuming broader policy development and program planning roles in their states, beyond those directly limited to administration and implementation of the Safe Streets Act; and a growing number of SPA's have taken the initiative in developing more comprehensive assessments of the manpower and training needs of the agencies in their jurisdiction. Although the types of information outlined in the specifications for the National Manpower Survey are all reasonable requirements for state-level manpower planning, the priority to be assigned to various categories of information--as well as the coverage, frequency, and amount of detail required--will vary, depending upon each SPA's functions and staff resources, as well as on its assessment of the most critical manpower needs and issues in its state.

Some insights as to these priorities, in a particular state, were obtained from a cooperative "prototype" survey effort of the National Manpower Survey staff with the planning staff of the North Carolina SPA--the Division of Law and Order of the State's Department of Natural and Economic Resources. The original plan for the National Manpower Survey had contemplated a series of nationwide surveys of criminal justice agencies and employees, to be executed with the active cooperation of SPA's in each state. This had been considered desirable, both from the standpoint of assuring that the survey instruments and results would be of maximum usefulness at both the state and federal levels, and as a demonstration of a federal-state cooperative relationship in development of a manpower data collection program. This procedure did not prove feasible, however, because of the concurrent initiation by the LEAA of the Census Employee Characteristics Survey, which included some, but not all, of the data planned for inclusion under the original NMS plan. The Census survey was executed by the Census Bureau, with the aid of its own field organization, hence, providing no role for the SPA's.

In addition to other major modifications in the NMS survey design described in Volume VIII, a demonstration survey project was initiated with the State of North Carolina, under which technical assistance would be provided to the SPA in development of a series of comprehensive surveys for use in its manpower planning. The objective was to develop a set of prototype instruments and procedures, which might serve as a model for other state agencies. North Carolina was selected for this purpose because of several considerations: its moderate size, its geographical accessibility to Washington, D.C., the existence of qualified SPA staff with prior experience in systematic collection of manpower data for their state, and--of primary importance--the active interest of the state's SPA Director and staff in enhancing the agency's manpower planning capabilities.

An initial phase of this project was the specification of data requirements by the SPA planning staff. These specifications were further developed through consultations with regional SPA staff and state operating agencies, as well as with survey specialists of the Bureau of Social Science Research. The categories of information desired from criminal justice operating agencies, as reflected in the various survey instruments described in Appendix C, provided comprehensive coverage of five of the seven subject areas identified in Table I-1, including: employment and turnover, agency expenditures and workloads, job characteristics, personnel characteristics, and executive opinions. In addition, consideration had been given to a separate employee survey, which would provide the information on employee opinions specified in Table I-1. Fund limitations, however, prevented further development and execution of the latter survey plan. The only other category of information identified in Table I-1 not explicitly provided for in the survey plans, was data on criminal justice training and education programs and institutions--partly because much of this information was already available to the state agencies concerned, and--in part--because the SPA in North Carolina did not have a direct role in administration of the LEEP program.

This survey planning process also provided useful insights into the diversity of needs for manpower criminal justice information on the part of State and local governmental agencies in North Carolina other than the SPA itself. Some of these specialized needs are listed below.[8]

State Criminal Training and Standards Council

- Salary distributions for law enforcement officers, in order to estimate appropriation needs for the State's Minimum Salary Program
- Personnel turnover data and number of new positions budgeted to aid in determining basic training needs and standards
- In-service training received, in order to set realistic minimum statewide in-service training standards
- Expert opinion on whether basic training should be required before an officer is sworn, to assist in establishing an appropriate standard on this issue

State Criminal Justice Academy and Community College Training Programs

- Number of personnel by duty position, and turnover data, to aid in determining approximate number needing various in-service training courses
- In-service training activity, by department, in order to identify areas in greatest need of in-service training
- Expert opinions on types of courses most needed.

Equal Employment Opportunity Programs

- Race and sex characteristics of personnel and of recruits, by agency and duty position, to aid in monitoring equal employment opportunity programs

State and Local Operating Agencies

- Detailed manpower, budget and workload data, for own agency, and comparative data for agencies of similar size (within state or nationally) to monitor trends, to assess manpower needs, and to aid in evaluating agency performance

General Government Officials--State and Local

- Summary data on agency manpower, costs and workloads, salaries, and training status of personnel for budget review and related purposes
- Expert opinions on selected issues requiring legislative action

The above list is not necessarily exhaustive for the particular agencies listed, nor is it necessarily indicative of the information needs of similar agencies in other states. One principle suggested, even by this partial listing, is that data needs become more detailed and specific as one moves from the federal to the state planning agency level, and--in turn--to the level of operating agencies responsible for day-to-day manpower and program decisions. At the same time, decision-makers in state and local agencies often have a need to compare their own agencies' standards, performance, and costs with similar agencies elsewhere. Hence, the desirability of designing manpower information systems using standardized definitions and procedures which would facilitate summary and comparison of needed data without costly and duplicative survey efforts.

CHAPTER I

FOOTNOTES

1. P.L. 90-576, 90th Congress.

2. Omnibus Crime Control and Safe Streets Act of 1968, as amended, Section 402(c).

3. U.S. Congress, Public Law 93-83, Crime Control Act of 1973, 93rd Congress, p. 3.

4. *State of the States: On Crime and Justice*, A Report of the National Conference of State Criminal Justice Planning Administrators, May 1976, p. 33.

5. A recent field survey conducted by the Advisory Council on Intergovernmental Relations in ten states found that none of SPA's visited had actually assumed a broad planning role for all state criminal justice activities. (*Making the Safe Streets Act Work* (1976), Chapter 6 (unpublished)). On the other hand, the National Conference of State Criminal Justice Planning Administrators reported, in 1976, that in a recent survey, about 43% of state administrators responding indicated that they had either a "great" or "moderate" role in influencing State agency budget requests. (*State of the States*, op. cit., p. 31).

6. A.C.I.R., *op. cit*., Chapter VI.

7. *State of the States*, op. cit., pp. 28, 72.

8. Based on communication to Director, National Manpower Survey, by Gordon Smith, North Carolina Department of National and Economic Resources, February 7, 1976.

CHAPTER II. PROJECTIONS OF CRIMINAL JUSTICE MANPOWER NEEDS TO 1985

A. INTRODUCTION

Although an assessment of future, as well as current, manpower needs of criminal justice agencies is a logical requirement for sound planning of education and training programs, our review of the status of manpower planning in this field indicated that very little systematic research had been focused on developing such projections prior to the NMS study at either the national or state level. One of the major tasks of the National Manpower Survey, therefore, was the projection of employment to 1985 for state and local law enforcement and criminal justice agencies. These estimates were disaggregated by major agency category and by occupation. In addition, estimates of recruiting needs in key occupations were projected to serve as a basis for estimating entry-level education and training needs in these occupations.

An initial step in the development of these projections was the formulation of a Criminal Justice Manpower Model, which describes a set of interrelationships among key variables hypothesized as "explaining" variations in criminal justice agency employment and expenditure levels. Section B of this chapter describes this model and presents findings on the relationships among the key variables developed by this model, based on analysis of state data for the years 1970-74.

Section C describes the assumptions and methods used in applying the NMS model to development of employment projections by sector and occupation to 1985, and presents the results of these projections.

Section D describes the methods used in projecting personnel turnover and recruitment needs in key criminal justice occupations.

Section E illustrates the methodology for applying these manpower projections to estimates of training requirements in key occupations.

A more detailed and technical description of the manpower model, and of the projection methods, is presented in Appendix A. In addition, a "User's Guide" is included in Appendix B, which describes model updating procedures. Although the latter is designed for national estimates of manpower and recruitment needs, the procedures described can be adapted for use at the regional or state levels as well.

B. THE NMS CRIMINAL JUSTICE MANPOWER MODEL

1. Theoretical Framework

The NMS Criminal Justice Manpower model defines a series of interrelationships among variables which are hypothesized to determine: (1) aggregate employment in all categories of criminal justice agencies, and (2) the distribution of employment among major categories of agencies or activities.

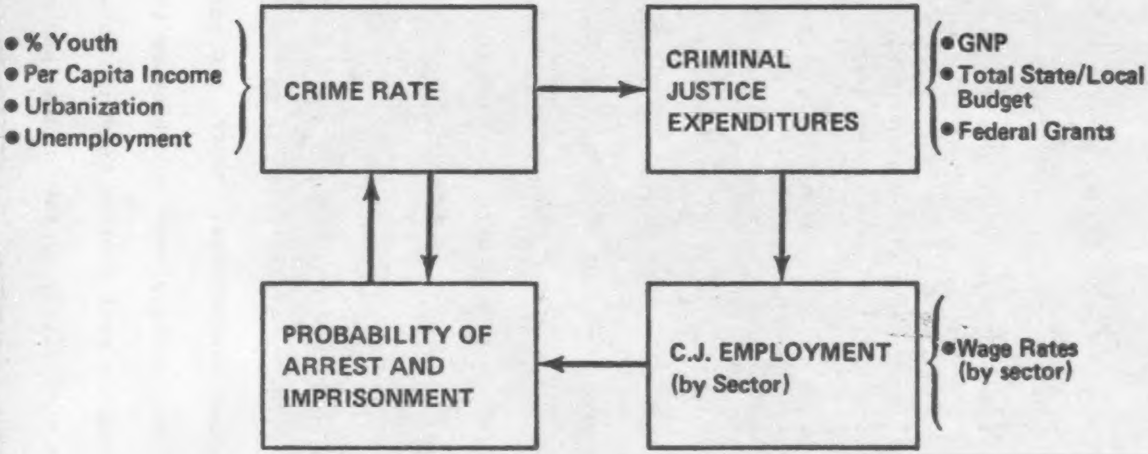
The behavioral assumptions underlying the model are derived from recent theoretical and empirical research on the determinants of public expenditures, and on the incidence of crime. The basic relationships assumed are illustrated in Figure 1. They are summarized below, and described in more detail in Appendix A.

- The demand for criminal justice services by state and local governments is measured by their total expenditures for these purposes. Criminal justice activities are highly labor intensive, as illustrated by the fact that in 1974, payrolls and related labor costs accounted for 85 percent of total expenditures

FIGURE II-1

KEY FACTORS AFFECTING LAW ENFORCEMENT AND CRIMINAL JUSTICE EMPLOYMENT

THE NMS ANALYTICAL MODEL


● % Youth
● Per Capita Income
● Urbanization
● Unemployment
CRIME RATE
CRIMINAL JUSTICE EXPENDITURES
● GNP
● Total State/Local Budget
● Federal Grants
PROBABILITY OF ARREST AND IMPRISONMENT
C.J. EMPLOYMENT (by Sector)
● Wage Rates (by sector)

for these activities. Hence, the total level of criminal justice expenditures and average wage rates in criminal justice agencies are the key variables defining aggregate employment levels.

- Criminal justice expenditures are--in turn--assumed to be a function of: (1) the community's need for such services as measured by the crime rate, and (2) the community's ability or willingness to pay for criminal justice services--as well as all other public services--as measured by its aggregate level of expenditures for all purposes.

- Recent economic theories of crime have attempted to interpret most forms of crime within a rational decision making framework. These postulate that individuals are more likely to engage in such criminal activity as robbery and burglary, rather than in legal employment, if the economic returns of crime are perceived to be better than the alternatives available to them, after allowing for the risks entailed in criminal activity. Under these theories, those who are poor, unemployed, and economically disadvantaged are more prone to engage in crimes such as robbery because they have little to risk and because their alternative ways of earning a living are limited. For these reasons, too, large urban centers, which include both concentrations of poor, minority populations and concentrations of wealth--i.e., "crime opportunities"--are more prone to higher crime rates than are smaller, more homogenous, middle-class communities. Youth, and particularly disadvantaged youth, are much more crime prone--both because they have the highest unemployment rates and the most limited earnings potential in legal pursuits and because they are more likely to take risks than more mature individuals.

- Total state and local expenditures are also strongly influenced by the aggregate level of economic activity, as measured by the gross national product

(GNP), through its impact on the size of governmental revenues. The rate of growth of GNP affects both the demand for criminal justice services, through its influence on unemployment and the crime rate, and the government's purchasing power or ability to pay for such services, through its influence on government revenues.

2. Formulation of the Model

Based on this theoretical framework, the model consists of a set of nine equations which incorporate twelve endogenous and nine exogenous variables. The exogenous variables, listed in Table II-1, include measures of key demographic or economic factors which are assumed to influence the levels of crime and/or the volume of criminal justice expenditures and employment. These factors are "external" to the criminal justice system itself and are capable of being independently estimated or projected for future periods. The endogenous variables, on the other hand, are those estimated by the system of equations. Intermediate outputs from this model include such key variables as the crime rate, the arrest rate, and the imprisonment rate. The final outputs are the projections of employment in each of the five major sectors of the criminal justice system: police protection, the judiciary, prosecution, indigent defense, and corrections. Supplemental estimating methods, described later in this chapter, are used for further disaggregation of the latter estimates by type of agency, jurisdiction, and occupation.

The major estimating equations for the model are described below.

a. Criminal Justice Expenditures (CJX) are estimated as a function of crime rates (TCR), total government expenditures by state and local governments (EXP), and federal grants for criminal justice activities (GRANTS).

TABLE II-1

VARIABLES IN NMS CRIMINAL JUSTICE MANPOWER MODEL

Variable	Definition
Exogenous Variables	
POP - Population	Total population of state
YTH - Youth Percentage	Percent of total population, aged 15-24 years, inclusive
URB - Urban Percentage	Percent of total population in Standard Metropolitan Statistical Areas (SMSA's)
UNM - Unemployment Rate	Percent of civilian labor force unemployed
PIN - Per Capita Personal Income	Total personal income in state divided by total population
EXP - Total Expenditures	Total direct general expenditures of state and local governments
GRANT - Federal Grants	Federal grants to state and local governments for criminal justice activities
$W_{1...5}$ - Wages	Average earnings of employees in each of the five sectors of the criminal justice system (full-time equivalents)*
Endogenous Variables	
CRIME - Number of Part I Census	Total Part I Crimes known to the police, as reported to FBI
TCR - Crime Rate	Part I Crime rate per 1,000 population
ARS - Number of Arrests	Number of arrests for Part I crimes
AR/CR - Arrest Rate	Ratio of arrests per Part I crime
PRIS - Prisoners	Number of inmates in state adult institutions
CJX - Criminal Justice Expenditures	Direct general expenditures of state and local governments for all criminal justice activities
$E_{1...5}$ - Criminal Justce Employment	Full-time equivalent employment by state and local governments for police prosecution [E_1], judicial [E_2], prosecution [E_3], indigent defense [E_4], and corrections [E_5].

*See following page.

TABLE II-1

(continued)

VARIABLES IN NMS CRIMINAL JUSTICE MANPOWER MODEL

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*Sector definitions are based on those used in the LEAA/Census annual reports on expenditures and employment data for the criminal justice system:

Police Protection -- Includes all government agencies whose function is that of enforcing law, preserving order and apprehension of violators. Such agencies include police departments, sheriffs' departments, special police forces maintained by government agencies outside of the criminal justice system, and lock-ups and tanks holding prisoners for 48 hours or less.

Judicial -- Includes all courts and activities associated with courts such as law libraries, grand juries, petit juries, etc. Courts include appellate courts, major trial courts, and courts of limited jurisdiction.

Prosecution -- Includes the civil and criminal justice activities of the attorneys general, district attorneys, States' attorneys, corporation counsels, solicitors, and legal departments.

Indigent Defense -- Includes activities associated with the right of persons to legal counsel and representation: offices of public defenders and other government programs which pay fees for appointed counsel.

Corrections -- Includes government agencies whose activities or functions involve the confinement and rehabilitation of adult and juvenile offenders. Limited to institutions with the authority to hold prisoners for more than 48 hours, such as prisons, reformatories, and jails. Also included are government agencies involved in diagnosis, evaluation, pardon, parole, and probation activities.

b. Crime Rates (TCR) are estimated as a function of the percentage of youth in the population (YOUTH), the percentage of the population in urban areas (URB), the unemployment rate (UNM), per capita personal income (PIN), the probability of arrest (AR/CR), and the ratio of prisoners to arrests (PRIS/ARS).

c. Arrest Rates are estimated as a function of the total number of crimes (CRIME), urbanization (URB), and police employment (E_1).

d. Prisoners in state adult institutions (PRIS) are estimated as a function of the number of arrests (ARS) and of employment in prosecution (E_3), defense (E_f), and corrections (E_5).

e. Employment ($E_1 \ldots E_5$) in each of the five criminal justice sectors is, in turn, estimated as a function of total criminal justice expenditures (CJX), of average earnings in the specific sector, and of the rate of change in the previous years of employment in each sector--the latter thus explicitly introducing a trend variable.

The data base used for estimation of this system of equations consisted of data for the 50 states for the years 1971-74. The base period chosen included all those years for which comprehensive employment and expenditure data for all categories of criminal justice agencies were available.

3. Model Estimation

As documented in Appendix A, all of the resulting equations yielded statistically significant results whose coefficients appeared generally consistent with the theoretical premises underlying the model. A brief description of these relationships follows.

• Criminal Justice Expenditures. The equation indicated that--after controlling for the effects of variations in crime rates and in the level of federal grants--variations in aggregate levels of expenditures by state and local governments were accompanied by proportionate variations in criminal justice expenditures. In other words, a 10 percent increase in total expenditures was associated with a short-term increase of the same magnitude in criminal justice expenditures.[1] The latter were also found to be responsive to variations in crime rates, but to a considerably lesser degree. Thus, a 10 percent increase in crime rates was found to result in only a 4 percent increase in the level of criminal justice expenditures. Total criminal justice expenditure levels by states and local governments were much less sensitive to percentage variations in the level of federal grants to state and local governments for criminal justice activities, since the latter accounted for only a modest share (3 percent) of total criminal justice expenditures by state and local agencies. A 10 percent increase in federal grants was found to be associated with an increase of only 0.3 percent in total criminal justice expenditures. When the latter result is related to the absolute magnitude of federal grants, it implies that about 50 cents of every dollar expended by the Federal Government for criminal justice grants is translated into net increases in expenditures by state and local governments, whereas the balance results in lower outlays by state and local governments than would otherwise be expected.

• Crime Rates. The crime rate equation in the NMS model was based on the premise that crime rates tended to increase with increases in the proportion of youth, in urbanization, in per capita income, and in unemployment, and tended to decrease with increases in arrest and imprisonment rates. All of these postulated relationships were in fact found to be statistically significant and in the expected directions. Based on this empirical analysis, it was found that crime rates were most sensitive to changes in youth percentages, in urbanization, and per capita income in that order. Table II-2 shows the percent change in crime rate associated with a 10 percent change in each of the independent variables.

TABLE II-2

ESTIMATED PERCENT CHANGE IN CRIME RATES DUE TO A 10 PERCENT INCREASE IN EXOGENOUS VARIABLES

10 Percent Increase In:	Short-Run Percentage Change in Crime Rates
Youth	13.2
Urbanization	8.5
Per Capita Income	7.2
Unemployment Rate	1.8
Arrest per Crime	-2.9
Prisoner per Arrest	-2.0

Source: NMS Projections model.

The relationships between crime rates and arrest and imprisonment probabilities warrant further comment since there has been considerable discussion in the literature concerning the "deterrence" and "incapacitation" effects of criminal justice activities upon crime rates. The NMS model found that increasing the probability of arrest by 10 percent decreased crime rates by almost 3 percent in the short run. Likewise, increasing the number of prisoners relative to the number of arrests by 10 percent would generate a 2 percent decrease in crimes.

• Arrests. The three variables hypothesized to affect the volume of arrests for Part I Crimes were the number of Part I crimes reported, the level of employment in law enforcement agencies, and the degree of urbanization. The latter variable was included in view of empirical evidence that arrest rates tended to vary inversely with size of community, possibly due to lesser community involvement in the law enforcement process in larger cities.

The estimated arrest equation indicated that changes in the level of crime, the degree of urbanization and the number of police, in that order, would have the greatest effect on the level of arrests as indicated in the following table:

TABLE II-3

ESTIMATED INCREASE IN PART I ARRESTS DUE TO A 10 PERCENT INCREASE IN CRIME, URBANIZATION, AND LAW ENFORCEMENT EMPLOYMENT

10 Percent Increases In:	Short-Run Percent Increases in Arrests
Part I Crimes	6.8
Urbanization	6.6
Law Enforcement Employment	3.4

As crimes increase, arrests tend to increase, but not proportionately: this is not unreasonable assuming a limitation on police resources and a time lag associated with expanding resources. The empirical analysis also suggests that a 10 percent increase in the proportion of the population in urban areas also decreases the probability of arrest by almost 7 percent. Finally, it was found that increasing the number of police employees by 10 percent increased the number of arrests by only 3.4 percent. Translating the relationship through the crime rate equation suggests that, all else remaining constant, a 10 percent increase in police employment would generate only a 1 percent decrease in Part I Crimes. This result is not inconsistent with findings of other research on the relationship between police expenditures or employment upon crime rates, based on state level data (see Volume II, Chapter II).

- Imprisonments. The estimation of the number of prisoners in state institutions was based on an equation which related changes in the number of prisoners to the number of arrests and to employment in the corrections and courts sectors. The empirical estimates verified the validity of the basic functional relationships assumed in this equation. An increase in annual arrests for Part I crimes of 10 percent was associated with a 6 percent increase in imprisonment. Increases of 10 percent in employment in corrections and prosecution agencies were associated with increases of 5 percent and of 0.8 percent, respectively, in prison populations. On the other hand, a 10 percent increase in employment for indigent defense was associated with a decrease of 0.8 percent in prison populations. This suggests that increased availability of defense counsel has a tendency to divert offenders from imprisonment in state institutions and/or to reduce the length of their sentences. (It is also possible that states which make greater provision for indigent defense have more lenient policies with respect to imprisonment than do other states. Hence, as in other aspects of the NMS analysis, causal relationships may be inferred--but cannot be established--from these results.)

- Employment. The estimation of employment by sector is the end-product of the above series of equations, all of which--directly or indirectly--provide inputs to the employment equations. Employment in each sector was assumed to be determined by the level of criminal justice expenditures, by wage rates (or average earnings) in each sector, and by the specific employment trend in recent years for that sector.

The degree of elasticity of sector employment in relation to aggregate criminal justice expenditures and to wage levels was found to vary significantly among the five major sectors. A 10 percent increase in total expenditures was associated with employment increases of about 6 percent in police, prosecution, and corrections, of 8 percent in indigent defense, and 10 percent in judicial employment. Increases in wages in particular sectors consistently were associated with some negative effects upon employment in these sectors, but there were considerable variations in wage elasticity among sectors. Generally, increased wages in other criminal justice sectors tended also to have a smaller but negative effect upon specific sector employment--although this pattern was not completely consistent.

Since these final employment equations are simply the last stages of an estimating procedure linking all of the exogenous variables described above, it is also possible to estimate the degree of sensitivity of employment to each of these variables. These results are shown in Table II-4. They in turn provide a frame of reference for interpreting the importance--in terms of employment effects--of the projections of these variables to 1985, as described in the following section.

TABLE II-4

EFFECT OF CHANGES IN SELECTED EXOGENOUS VARIABLES ON CRIMINAL JUSTICE SYSTEM EMPLOYMENT[a]

Exogenous Variables	Percent Change in Employment Due to 10% Change in Exogenous Variables				
	Police	Judicial	Prosecution	Defense	Corrections
Federal Grants	0.2	0.3	0.2	0.3	0.2
Total State and Local Expenditures	6.1	10.0	5.8	8.2	6.3
Urban Population	2.0	3.4	1.9	2.7	2.1
Personal Income Per Capita	1.7	2.9	1.6	2.3	1.8
Youth Age 15 to 24	3.1	5.3	3.0	4.2	3.2
Unemployment Rate	0.4	0.7	0.4	0.6	0.4

[a] Estimated short-run elasticities at the mean.

Source: NMS Projections Model.

C. PROJECTIONS OF SECTOR EMPLOYMENT

1. The NMS Projection Scenario

In order to project future trends in criminal justice employment, under the system of equations described above, projections were required for each of the exogenous variables found to impact upon criminal justice expenditures and employment. Some of these exogenous variables, such as population trends, are capable of prediction with reasonable accuracy for a 10-year period ahead. However, most of the key economic and fiscal variables can be projected with much less confidence. The most critical of these is the future state of the nation's economy, as measured by such indices as the gross national product and the unemployment rate. Despite the development of increasingly sophisticated economic models, any long-term projections of the nation's economy are subject to large potential errors, simply because they entail numerous assumptions concerning future national fiscal, economic and political conditions. The resulting estimates can therefore best be described as contingent projections of expected trends in the dependent variable, i.e., criminal justice employment, under a specified set of assumed economic conditions.

The economic scenario adopted for this purpose was based on the National Economic Projection Series of the National Planning Association. These projections provide short-term forecasts of probable economic trends to 1980 and are designed to portray an attainable growth pattern for the economy beyond 1980, leading to substantially full employment by 1985. The short-term economic outlook under the most recent NPA projection provides for a relatively low average GNP growth rate of 2.7 percent annually, in constant dollars, during the period 1974-80, reflecting the effects of the severe 1973-75 economic recession, of a partial recovery from that recession in 1975-77, and of another projected slowdown in economic growth rates toward the close of the current decade. This would be followed by a substantially higher GNP growth rate of 4.2 percent annually during the period 1980-85, a trend compatible with a full employment assumption for the latter year. In the light of these overall economic growth trends, the following trends were projected for other key economic variables, as shown in Table II-5.

- The unemployment rate, which rose from 4.9 percent in 1973 to a post-World War II high of 8.5 percent in 1975, is projected at 7.0 percent in 1980 and 5.0 percent in 1985. The latter level is considered by many economists as an attainable goal for a peacetime economy, particularly in view of the projected reductions in the proportion of youth in the labor force--the age group which normally experiences the highest rates of unemployment.

- Total state and local expenditures are expected to increase at an annual rate of 3.3 percent, in constant dollars, between 1974 and 1980. This is a continuation of the relatively slow rate of increase experienced in 1971-74 (3.2 percent), but contrasts with the annual rate of growth of 5.0 percent between 1965 and 1970. A more rapid growth of these expenditures, at a rate of 4.8 percent per year, is projected for 1980-85, reflecting the assumed recovery to a high employment economy by the latter year.

- Per capita personal income is projected to increase at an annual rate of 1.9 percent, in constant dollars, for both 1974-80 and 1980-85. This compares with an average annual growth rate of 1.4 percent in the period 1971-74.

- Federal grants to state and local governments for criminal justice activities, which had grown at a very rapid rate betwen 1970 and 1974, are projected to increase an an annual rate of 2.0 percent between 1974 and 1980, in constant dollars, and at 2.5 percent between 1980 and 1985, the same rates as those projected for all types of federal grants in these periods.

TABLE II-5

THE NMS PROJECTION MODEL: PROJECTIONS OF KEY ECONOMIC, FISCAL, AND DEMOGRAPHIC VARIABLES, 1974-85

	Actual	Projected			Average Annual Growth Rates	
	1974[a]	1980	1985	Percent Change 1974-85	1974-80	1980-85
Economic and Social Variables[a]						
GNP ($ billion)	953	1,082	1,336	40	2.1	4.2
Total state and local expenditures ($ billion)	167	204	258	54	3.3	4.8
Federal Grants for Criminal Justice Activities ($ billion)	.94	1.1	1.2	28	2.0	2.5
Per capita income ($)	4,584	5,145	5,643	23	1.9	1.9
Unemployment rate (percent of civilian labor force)	5.6	7.0	5.0	-11	3.8	-6.3
Demographic Variables						
Total Population[b] (millions)	211.9	223.0	234.3	11	0.9	1.0
Youth, ages 15-24, as a percent of total Populations[b]	18.7	18.6	16.4	-12	-0.1	-3.7
Urbanization--SMSA population as a percent of total	72.8	71.9	71.2	-2.2	-.21	-.21

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[a] Source: H. Townsend, T. Sivia, and M. Kendall, Investment in the Eighties, NPA, National Economic Projections Series, 1976.

[b] Source: Bureau of the Census, Current Population Reports, Series P-25, No. 601, "Projections of the Population of the United States: 1975 to 2050."

- Average wages of criminal justice employees, in constant dollars, are projected to increase at an annual rate of 1 percent between 1974 and 1980, or at about the same rate as the increase in minimum salary rates for police patrolmen between 1969 and 1974. A higher rate of growth, of 2 percent per year, is projected for 1980-85, as a result of the tighter labor market conditions assumed during the latter period.

Projections of total population and of the proportion of youth and urban residents were additional key inputs into the model.

- Total population is projected to increase from 212 million in 1974 to 223 million in 1980 and 234 million in 1985. The projected annual net rates of growth of 0.9 percent and 1.0 percent, respectively, are similar to those experienced in the 1970-74 period, but contrast with more rapid growth rates during the decade of the 1960's.

- Youth, aged 15-24 years, who represented 18.7 percent of the total population in 1974 are expected to account for about the same proportion in 1980 (18.6 percent), but to drop to 16.4 percent in 1985, as a result of the reduction in births since the early 1960's. This trend contrasts sharply with the previous growth in the relative size of this age group from 13.4 percent in 1960 to 18.7 percent in 1974, as members of the post-World War II "baby boom" generation moved into this age range.

- The "urban" percentage of the population, as measured by those residing in Standard Metropolitan Statistical Areas (SMSA's) has declined gradually each year between 1970 and 1974, in contrast to its previous long-term growth trend. A continuation of this decline, at a rate of about 0.2 percent annually, is projected for the period 1974-85.

2. Criminal Justice Workload, Expenditures, and Employment Projections

The major outputs of the NMS projections model, shown in Table II-6, include national projections of key workload indicators (crimes, arrests, imprisonments), of criminal justice expenditures, and of employment by sector. These trends are summarized below.

- The crime rate, as measured by the FBI index for Part I offenses, is expected to continue to grow between 1974 and 1980, but to decline significantly between 1980 and 1985. The projected increase, from 4.8 offenses per thousand population in 1974 to 5.4 in 1980, is due in part to the continued high unemployment levels projected for this period. Its anticipated growth rate, averaging 1.8 percent annually, is much lower than for recent periods as a result of the stabilization of the proportion of youth in the population, and the gradual decline in the proportion of population residing in metropolitan areas. The projected reduction after 1980, to 4.6 per thousand population in 1985--at a rate of 3.9 percent annually--reflects mainly the combined effects of the reduction in the proportion of youth, the assumed reduction in unemployment, and a continuance of the reduction in the proportion of the population living in metropolitan areas. It is also influenced by the projected increases in criminal justice expenditures and employment discussed below.

- The number of arrests for Part I offenses is projected to increase from 2.16 million in 1974 to 2.6 million in 1980, as the combined result of increases in Part I crimes and of a projected increase in the arrest rate per reported offense associated mainly with increased expenditures and employment in law enforcement activities. A reduction in arrests to 2.42 million in 1985 is projected, reflecting the net effect of the projected reduction in crime volume and of increased arrest rates.

TABLE II-6

THE NMS PROJECTION MODEL: PROJECTIONS OF SELECTED CRIMINAL JUSTICE WORKLOAD INDICATORS, EXPENDITURES AND EMPLOYMENT BY SECTOR: 1974-85

	Actual 1974	Projected		Percentage Change 1974-85	Average Annual Growth	
		1980	1985		74-80	80-85
Part I-Crimes	10,192	11,989	10,174	-.2	2.7	3.2
(Rate Per Thousand Population)	4,821	5,377	4,400	-9.0	1.8	-3.9
Part I-Arrests (in thousands)	2,164	2,604	2,421	12	3.1	-1.4
Arrests per Part I Crime	.21	.22	.24	14	0.7	1.8
Prisoners in State Institutions	190	243	252	33	4.2	0.7
Prisoners Per Arrest	0.9	0.9	.10	11	-	2.1
Criminal Justice Expenditures ($ Billion Constant 1972 Dollars)	10.9	14.0	16.6	52.0	4.3	3.5
Criminal Justice Employment (Full-Time Equivalent)	916	1,171	1,304	42	4.2	2.2
Police Protection	539	655	718	33	3.3	1.8
Judicial	118	155	182	54	4.6	2.7
Prosecution and Legal Services	45	66	79	76	6.5	4.0
Indigent Defense[a]	11	17	21	91	7.5	4.3
Corrections	203	278	324	60	5.4	3.1

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[a] Includes estimate of publicly-funded contract employment, as well as employees in public defender offices.

Source: NMS Projection Model

- Prisoners in state institutions for adults are projected to increase from 190,000 in 1974 to 243,000 in 1980, as a result of the projected increase in volume of arrests (to 1980) and of a projected stabilization in the ratio of prisoners per arrest during this period--in contrast to the sharp decline in this ratio during the 1960's. The continued small net increase to 252,000 in 1985, despite a reduction in arrest volumes, implies a policy of increased reliance upon imprisonment, particularly for serious repeat offenders, and allows for the effect of a projected continued growth in criminal justice expenditures during this period, particularly for corrections, and prosecutor personnel. (A more detailed analysis of these trends is included in Volume III, Chapter III.)

- Criminal justice expenditures by state and local governments are projected to grow by 52 percent between 1974 and 1985, in constant dollars. The growth rates are influenced by the projected trends in total state and local expenditures and in crime rates. Between 1974 and 1980, the annual rate of increase in criminal justice expenditures is projected at 4.3 percent, as compared with 3.3 percent for total state and local expenditures. However, the projected growth of criminal justice expenditures is expected to decline to an annual rate of 3.5 percent in 1980-85, as contrasted to a more rapid growth in total state and local expenditures of 4.8 percent, due to the projected decline in crime rates in the latter period.

- Employment in state and local criminal justice activities, in turn, is projected to increase from 916,000 in 1974 in full-time equivalents, to 1,307,000 in 1985, or by 43 percent--with much more rapid growth between 1974 and 1980 than between 1980 and 1985. Employment growth rates are lower than projected expenditure trends in each period since the projections allow for the short-run and long-term effects of wage increases in each sector. Employment growth in police protection agencies is projected to be at a substantially lower rate than in other sectors, reflecting recent trends in differential growth rates by sector. The number of full-time equivalent police protection employees will increase by 33 percent, from 539,000 in 1974 to 718,000 in 1985, under this projection. In contrast, the projections indicate increases of 60 percent in correctional employment, of 54 percent in judicial employees, 76 percent in employment in prosecution and legal services agencies, and of 91 percent in indigent defense activities over the same period.

Although the above projections have been presented in a relatively precise form in Table II-6, it must be emphasized that they are subject to progressively larger margins of error, the greater the projection period. The most crucial variables, based on our model, are those related to overall levels of economic activity and to related fiscal policies, which will impact both on levels of state and local revenues and expenditures, and on crime rates (through their effect on unemployment). The degree of uncertainty inherent in such projections is illustrated by some of the economic goals of President-elect Carter, which provide for a reduction in unemployment to 5 percent or less by the end of his four-year term (in contrast to the assumption in the NMS model of 7 percent in 1980) and for considerably more rapid economic growth rates between 1976 and 1980 than implied in our projections. These and related economic goals, if realized, could significantly alter the aggregate trends in criminal justice expenditures and employment described above. For this reason, Appendix B includes a description of model updating procedures which will permit users to periodically revise the above projections by introduction of revised or alternative estimates of key exogenous variables.

D. PROJECTIONS OF EMPLOYMENT BY OCCUPATION

The occupational distribution of employment in the major categories of criminal justice agencies can be expected to change over a period of years, as a result of the introduction of new or revised policies, programs, and methods of operation; of changing workloads; and of changes in personnel utilization practices. Systematic projections of occupational requirements are normally based on historical trend data, which reflect the net effect of such influences upon the occupational distribution of jobs in particular industries or activities. For example, the Bureau of Labor Statistics, in its projections of employment by occupation for all major occupations in the United States economy, has constructed "industry-occupation" matrices, based on Census data for 1960 and 1970, which show the occupational distribution of employment by industry for these years and are used in projections of these distributions to 1980 and 1985.[2]

A similar methodology could not be generally applied to the projection of occupational employment in state and local criminal justice agencies because of the absence, in most agency categories, of trend data on occupational distributions of agency personnel. Such data, where available, were utilized in the projection of the occupational distribution of personnel in specific sectors or agency categories. In addition, analyses were made of differences in occupational staffing patterns among agencies within each sector, classified by specific type of agency and/or by size group. Trends in employment by type or size group were then projected, and--in turn--served as a basis for deriving occupational projections for the sector as a whole. Supplemental information, with respect to differential growth trends by occupation, was also obtained from a number of sources, including responses to questions of the NMS executive surveys. Descriptions of the estimating methods used, and of the resulting occupational projections, are presented below for each of the major sectors.

1. Police Protection Agencies

The projection of police employment by occupation was based on an analysis of differential growth rates of police agencies by jurisdiction (state, county, local) and by size of agency, as well as on an extrapolation of past trends in the proportions of sworn and nonsworn employees in each of these agency categories.

Analysis of the 1974 occupational distributions of employees in police protection agencies indicated significant variations in occupational staffing patterns by agency type and size (Volume II, Tables II-2 and II-3). Thus, state and county level agencies employed larger proportions of personnel in support positions than did municipal agencies, and--among the latter--the proportion of support personnel employed tended to increase with agency size. Similarly, police agencies in larger cities utilized a larger proportion of civilian (nonsworn) employees than did agencies in smaller cities, although there has been a trend towards increased use of civilians in all agency categories (Volume II, Chapter III).

Based on recent trends, employment growth is expected to be more rapid for state and county police agencies (about 4 percent annually), than for city agencies (about 2 percent) (Table II-7). Similarly, among local police protection agencies, the smaller and medium-sized agencies are expected to increase their employment more rapidly than either the large agencies, with 400 or more employees, or the very small agencies, with fewer than 25 employees, in 1974 (Table II-8).

TABLE II-7

PROJECTED POLICE PROTECTION EMPLOYMENT, BY LEVEL OF GOVERNMENT: 1974-85

Type of Agency	Number of Full-Time Equivalent Employees			Percentage Increase 1974-85	Average Annual Growth Rate, 1974-85
	1974	1980	1985		
Total	539,000	654,000	718,000	33%	2.6%
City	366,000	428,000	454,000	24	2.0
County	83,000	110,000	129,000	54	4.0
State	90,000	116,000	135,000	53	3.9

Source: 1974: U.S. Department of Justice, LEAA and U.S. Bureau of the Census, Expenditure and Employment Data for the Criminal Justice System, 1974, Table 3, p. 21. 1980-85: NMS Projections.

TABLE II-8

CURRENT AND PROJECTED DISTRIBUTION OF LOCAL POLICE EMPLOYMENT, BY SIZE OF AGENCY

Size of Agency	1974[a]	1985[b]
More than 1,000 employees	31.8	27.0
400 - 999	9.7	9.6
150 - 399	11.4	14.4
75 - 149	10.7	11.8
25 - 74	14.7	16.2
Less than 25	22.2	21.0
Total	100.0	100.0

[a] 1974 data adapted from U.S. Bureau of the Census, Employee Characteristics Survey (1974). Include city and county agencies.

[b] Projected distributions for 1985 based on analysis of historical growth rates for a sample of cities and counties drawn from FBI Uniform Crime Reports.

These differential growth trends, as well as projected trends in the proportions of sworn and nonsworn employees, have been incorporated into the projections of total police agency employment, by occupational group, shown in Tables II-9 and II-10. Sworn officer employment is projected to grow at a slower-than-average rate of 2.2 percent annually, as compared with an estimated growth of 4 percent for nonsworn employees. Total employment of nonsworn or civilian employees is projected to increase by 33 percent, from 117,000 in 1974 to 179,000 in 1985. Supporting positions--including both direct and indirect support--will account for an increased share of total police employment. Employment in these functions and activities is expected to grow by about 53 percent between 1974 and 1985, as contrasted to a projected increase of 27 percent for personnel in line patrol and investigation activities. Occupations such as dispatchers, data processors and investigative technicians will experience relatively rapid growth, but an increased proportion of these positions is expected to be filled by civilian personnel. As a result, sworn officers will continue to be concentrated in line patrol, investigative, and supervisory activities.

2. Court Agencies

The projected occupational distribution of judicial employment is based on recent growth patterns in employment in appellate courts, major trial courts, and courts of general jurisdiction, and on trends in the ratio of support personnel to judicial personnel in recent years. In order to project occupational employment trends within the judicial sector it was necessary to: (1) estimate the current occupational distribution of employment, by level of courts; (2) to project the employment growth for each type of court; and (3) to project the ratio of support staff to judicial personnel.

TABLE II-9

CURRENT AND PROJECTED OCCUPATIONAL DISTRIBUTION OF SWORN AND NONSWORN EMPLOYEES IN STATE AND LOCAL POLICE AGENCIES: 1974, 1980, 1985

(Number in Thousands)

	1974			1980			1985		
	Total	Sworn	Non-Sworn	Total	Sworn	Non-Sworn	Total	Sworn	Non-Sworn
Total Employment	539.4	422.6	116.8	654.7	502.8	151.9	718.0	538.9	179.1
Primary Operation Positions, Total	412.3	384.1	28.2	489.1	456.8	32.3	523.9	489.2	34.7
Management	40.3	39.7	.6	47.7	47.1	.6	50.6	50.0	.6
Line, Total	336.0	336.0		400.1	400.1		428.9	428.9	
Supervision	23.7	23.7		28.5	28.5		30.8	30.8	
Basic Line	312.3	312.3		371.6	371.6		398.1	398.1	
Patrol	265.4	265.4		315.7	315.7		337.9	337.9	
Investigation	46.9	46.9		55.9	55.9		60.2	60.2	
School Crossing Guards, Meter Checkers, Trainees	36.0	8.4	27.6	41.3	9.6	31.7	44.4	10.3	34.1
Support Positions, Total	127.1	38.5	88.6	165.6	46.0	119.6	194.1	49.7	144.4
Direct Support Personnel, Total	51.0	19.9	31.1	66.7	23.9	42.8	77.5	26.1	51.4
Dispatchers and Communications	25.6	5.1	20.5	34.2	6.1	28.1	39.3	6.3	33.0
Other Direct Support	25.4	14.8	10.6	32.5	17.8	14.7	38.2	19.8	18.4
Indirect Support, Total	76.1	18.6	57.5	98.9	22.1	76.8	116.6	23.6	93.0
Professional, Technical and Administration	17.9	11.8	6.1	22.8	14.3	8.5	25.4	15.3	10.1
Clerical, Crafts and Service Workers	58.2	6.8	51.4	76.1	7.8	68.3	90.9	8.3	82.6

Source: 1974 estimates based on Census Employee Characteristics Survey, LEAA, Employment and Expenditures Data for Criminal Justice System, 1974; Projections from NMS Projections Model.

TABLE II-10

PROJECTED GROWTH OF LAW ENFORCEMENT EMPLOYMENT, BY PERSONNEL CATEGORY AND FUNCTIONAL GROUPS: 1974-85

Occupation	Percent Change	Average Annual Growth Rates
Total Employment	33.2	2.6
Personnel Category:		
Sworn	27.4	2.2
Nonsworn	53.3	4.4
Functional Groups:		
Management	24.3	2.0
Line Supervisors	28.4	2.3
Basic Line Officers	27.4	2.2
Patrol	27.0	2.2
Investigation	28.4	2.3
Direct Support	52.5	3.9
Indirect Support	51.2	3.8

Source: NMS Manpower Projections Model.

Total judicial employment is projected to increase at an average annual rate of 4.6 through 1980 and at a rate of 3.4 percent between 1980 and 1985. During the period 1971-74 judicial employment increased at an annual rate of 10 percent in appellate courts, 8.2 percent in general jurisdiction courts, and 4.1 percent in limited courts. The relatively slow growth rate of employment in limited jurisdiction courts is a consequence of recent moves toward reorganization and consolidation of cumbersome multi-tiered court systems and is expected to continue into the future. During the period 1971 to 1973, four states abolished all of their lower courts; two states--Florida and Nebraska--moved towards the creation of a single tier of lower courts; four states--Minnesota, Idaho, Ohio, and Alabama--have reduced the number of lower courts operating within their existing framework, and several other states have passed legislation to consolidate their lower courts. The projected employment distribution presented in Table II-11, therefore, assumes a continuation of the more rapid relative growth rates in the appellate and general courts indicated by these trends.

Since 1971, employment of support personnel has outpaced the employment of judges in general jurisdiction and appellate courts. The number of support employees per judge increased from 5.6 to 6.2 in courts of general jurisdiction, and from 3.6 to 4.8 in appellate courts. During this period, employment of judges in general jurisdiction courts grew at less than half the rate of total employment in these courts. A continuation of these differential growth patterns was assumed in arriving at the projected distribution of judicial employees presented in Table II-12.

TABLE II-11

JUDICIAL EMPLOYMENT BY TYPE OF COURT: ACTUAL: 1971, 1974, PROJECTED: 1980, 1985

	Full-Time Equivalent Employment (000)				Average Annual Growth Rates	
	1971	1974	1980	1985	Actual, 1971-74	Projected, 1974-85
Total Judicial Employment	99.7	118.4	154.8	182.6	5.9	4.0
Appellate	3.3	4.4	6.7	8.8	10.1	6.5
General Jurisdiction	34.3	43.5	62.1	77.5	8.2	5.4
Limited	48.5	54.8	66.5	74.8	4.1	2.9

Sources: Data for 1971 and 1974 from LEAA/Census, Expenditures and Employment Data for The Criminal Justice System

TABLE II-12

ACTUAL AND PROJECTED EMPLOYMENT OF JUDGES AND SUPPORT PERSONNEL IN APPELLATE AND GENERAL JURISDICTION COURTS 1974-85

	Employment			Percent Change	Average Annual Growth	
	Actual[a]	Projected		1974-85	1974-80	1980-85
	1974	1980	1985		Percent)	
Total	47,800	68,800	86,200	80	6.3	4.6
Judges	6,160	7,480	8,380	36	3.3	2.3
Support Personnel	41,640	61,230	77,820	87	6.8	4.9

[a] Total employment from LEAA Expenditures and Employment Data for the Criminal Justice System, 1974. Includes an estimate for general jurisdiction courts, based on reports from 312 large counties.

Number of judges based on Council of State Governments, State Court Systems Revised 1974, April 1974. Includes an estimate to adjust to an October 31, 1974 date.

3. Prosecution and Legal Services

In 1974, 45,400 persons were employed by state and local governments in agencies providing prosecution and legal services. Twenty-six percent of these employees were at the state level and 74 percent at the local level. As shown in Table II-13 below, employment at the state level had grown at a much faster rate between 1971 and 1974 (13 percent), than in local prosecution agencies (9 percent). By 1985, it is projected that 78,800 persons will be employed in prosecution and legal services agencies. A larger proportion, 30.8 percent, is expected to be at the state level, assuming a continuation of recent growth patterns.

The rapid growth in state prosecution functions, and the assumed continuation of the trend, can be attributed to the reasons listed below.

- A 1973 survey by the National Association of Attorneys General indicated that local prosecutors devoted on the average about 78 percent of their time to criminal cases.[3] One can assume, therefore, that the recent growth in prosecution employment at the local level is a response to rapidly growing criminal case workloads, as reflected in the growth of crime rates and the increase in the number of persons charged. Thus, the number of persons charged

TABLE II-13

EMPLOYMENT IN STATE AND LOCAL PROSECUTION AND LEGAL SERVICES AGENCIES: ACTUAL, 1971, 1974; PROJECTED, 1980, 1985

	Full-Time Equivalent Employment (000)				Average Annual Growth Ratios	
	1971	1974	1980	1985	1971-74	1974-85
Total	34.1	45.4	66.0	78.8	10.1	5.1
State	8.1	11.8	19.2	24.3	13.4	6.8
Local	26.0	33.6	46.8	54.5	8.9	4.5

Source: Data for 1971 and 1974 from Census/LEAA, Expenditures and Employment Data for Criminal Justice Agencies.

for Part I offenses increased from 1,480,000 in 1971 to 1,789,000 in 1974. It is expected to increase to 2,100,000 in 1980, but to return to about the 1974 levels in 1985.[4]

• At the state level, however, the increase in employment in prosecution and legal services functions appears to be due more to an increase in civil functions than to crime-related caseloads. Based on data from the National Association of Attorneys General survey, the number of attorneys assigned specifically to crime units increased by 62 percent, from approximately 390 in 1972 to 630 in 1975. However, attorneys in crime units represented only 15 percent of all attorneys employed in these state agencies.[5] In 1975, 30 states had consumer protection units with 240 attorneys, a 41 percent increase over the number of attorneys performing this function in 1972. Also, during this period, seven more states established environmental protection agencies, bringing the total to 22 states with such agencies. There has also been substantial growth in legal staffing of anti-trust units and of other separate administrative units. These data thus suggest that factors unrelated to criminal caseloads contributed substantially to the growth in state prosecution employment. The projections in Table II-13 assume a continued growth in these and similar caseloads, resulting in a continued relatively rapid growth in state agency employment.

The occupational projection for prosecution and legal services agencies was based on recent trends in growth of legal and non-legal (support) staffs and on responses to the NMS surveys. Chief prosecutors responding to the NMS executive survey indicated an expected increase of 5.9 percent in their employment of attorneys and a 5.5 percent increase in support personnel for 1975-76. During the three-year period between 1972 and 1975, the number of attorneys in state general offices grew at a faster annual rate (4.8 percent) than did support staff (3.1 percent).[6] Thus the projections assume that, at the state level, employment of attorneys will increase at a somewhat faster rate than employment of support personnel. At the local level the occupational distribution is assumed to remain the same as in 1974.

The resulting occupational projections for all state and local prosecution and legal services agencies indicate a relatively rapid growth in employment of attorneys as prosecutors or assistant prosecutors, from 19,300 in 1974 to about 37,000 in 1985, or by more than 90 percent, whereas support categories of personnel, including investigative, clerical, paralegal, and other staff, are expected to experience an employment growth of about 50 percent during this period (Table II-14).

4. Indigent Defense

In 1974, approximately 6,000 employees were reported as directly employed in public defender agencies on a full-time equivalent basis. However, many more individuals were employed to provide defense services either through some form of contractual agreement or assigned counsel system. Based on reported total expenditures for indigent defense in 1974, and on the assumption that contract personnel received the same average earnings as those employed directly in public indigent defense agencies, it is estimated that the services of an additional 5,000 full-time equivalent individuals were provided to state and local defender agencies in 1974 through contactor or assigned counsel arrangements.

In 1972, the Argersinger vs. Hamlin ruling mandated that defense services be provided for indigent misdemeanor and petty offenders who could be subject to imprisonment if found guilty. Recent employment patterns are of particular

TABLE II-14

OCCUPATIONAL DISTRIBUTION OF EMPLOYMENT IN PROSECUTION AND LEGAL SERVICES: ACTUAL, 1974; PROJECTED, 1980 AND 1985

(full-time equivalent employees, in thousands)

	1974	1980	1985	Percent Change, 1974-85
Total	45,400	66,000	78,800	73.6
Chief and Assistant Prosecutors	19,300	30,200	37,100	92.2
Investigators	7,100	9,700	11,100	56.3
Paralegals	1,100	1,500	1,700	54.5
Clerical	14,200	19,500	22,400	57.7
Other	3,700	4,900	5,600	51.4

Source: NPA Projections.

interest, then, to the extent that they provide an indication of the directions in which defender agencies are moving and the pace at which employment is growing to accommodate this increased workload. Between 1971, prior to the Argersinger decision, and 1974, employment of defenders increased by 68 percent, while estimated contract or government-funded employment increased by 127 percent, with most of this growth at the state level (Table II-15). Thus, it appears that, while employment in public defender offices was increasing at a rapid rate, there was greater growth in the use of assigned counsel and other contractual arrangements than in direct employment in public defender agencies.

Total indigent defense employment is projected to almost double by 1985. This is a substantially slower rate than was evidenced during the period 1971 through 1974, a period in which many defender agencies were established. We can expect a slower growth rate in the future as the rate of increase in criminal justice expenditures decreases and as the number of defender agencies stabilizes.

Although we are projecting slower future employment growth for the indigent defense function than in 1971-74, it is expected that the recent patterns of growth--more rapid at the state level and increased use of non-payroll employees--will hold in the future. It is expected that in 1985, there will be 10,000 employees on public payrolls and an additional 11,000 individuals who provide defense services on a contractual basis with government funding (Table II-16).

Available evidence indicates that no significant change in the ratio of support personnel to attorneys is expected among employees in public defender offices. Executives responding to the NMS survey of chief defenders indicated they expect employment of attorneys and support personnel to grow at the same

TABLE II-15

INDIGENT DEFENSE EXPENDITURES AND EMPLOYMENT, BY LEVEL OF GOVERNMENT 1971-74

(Employment estimates in full-time equivalents)

	Total			State			Local		
	1971	1974	Percent Change	1971	1974	Percent Change	1971	1974	Percent Change
Expenditures (millions)	67.5	153.0	126	16.5	51.7	213	51.0	101.3	99
Total Employment (thousands)	5,700	11,300	98	1,500	4,300	186	4,200	7,000	67
Public Payroll	3,500	5,900	68	1,000	2,600	160	2,500	3,300	32
Contract (est.)	2,200	5,400	127	500	1,700	240	1,700	3,700	118

Source: Census/LEAA, Expenditures and Employment Data for Criminal Justice Activities, 1971, 1974.

TABLE II-16

PROJECTED EMPLOYMENT FOR INDIGENT DEFENSE FUNCTION, 1974, 1980, 1985

	1974	1980	1985
Total Employment	11,300	17,100	21,100
On Public Payrolls	5,900	8,000	10,200
Other	5,400	9,100	10,900

TABLE II-17

CURRENT AND PROJECTED OCCUPATIONAL DISTRIBUTION OF EMPLOYMENT IN PUBLIC DEFENDER AGENCIES

(full-time equivalent employees)

Occupation	1974	1980	1985
Total Public Employees	5,900	8,000	10,200
Defenders	3,200	4,340	5,540
Investigators	760	1.030	1,310
Support	1,940	2,630	3,250

rate (6 percent) for 1975-76. Therefore, these projections assume that the occupational distribution of employees on public payrolls will remain about the same as in 1974. Table II-17 shows the current and projected occupational distribution for these agencies.

5. Corrections

Separate employment projections were made for the three major categories of correctional agencies at the state and local levels: adult institutions, juvenile institutions, and probation/parole agencies, based on growth patterns for the period 1971-74 (Table II-18). These indicated sharply divergent trends. The most rapid overall employment growth is projected for probation/parole agencies, which are expected to more than double their employment by 1985. Employment in adult correctional institutions is projected to increase by 58 percent, as contrasted to a net growth of only 12 percent in juvenile institutions. In the latter category, reduced employment in state training centers is expected to be offset by relatively rapid growth in locally-based juvenile facilities. (A detailed discussion of these trends is included in Volume III, Chapter III.) The methods used in projecting occupational distributions for these agency categories are summarized below.

a. State Adult Institutions. Detailed distributions of employment in state prisons and other adult institutions are available for 1962 and 1974 from the Censuses of correctional facilities for those years. Although custodial officers were the largest single occupational group in both years, comparisons of employment growth by occupation over this 12-year period indicate much sharper relative employment increases for all categories of treatment specialists, other than doctors, as well as substantial reductions in inmate-staff ratios (Table II-19). Treatment specialists, including educa-

TABLE II-18

CURRENT AND PROJECTED CORRECTIONS EMPLOYMENT BY LEVEL OF GOVERNMENT AND FUNCTION

Occupation	Number of Full-Time Equivalent Employees (000)			Percent Distribution			Percent Change 1974-85
	1974[a]	1980	1985	1974	1980	1985	
Total	203	278	324	100	100	100	60
Adult Institutions	106	145	167	52	52	52	58
Juvenile Institutions	43	47	48	21	17	15	12
Probation/Parole	46	75	96	23	27	30	109
Administrative and other	8	11	12	4	4	4	50
State[a]	113	149	173	56	54	53	53
Adult Institutions	66	90	104	33	32	32	58
Juvenile Institutions	29	26	24	14	9	7	-17
Probation/Parole	18	33	45	9	12	14	150
Local[b]	81	118	138	40	42	43	70
Adult Institutions	40	55	63	20	20	19	58
Juvenile Institutions	14	21	24	7	8	7	71
Probation/Parole	27	42	51	13	15	16	89

[a] Source: The 1974 distribution of correction employment is from LEAA/Census, Expenditure and Employment Data for the Criminal Justice System, 1974, Tables 9, 45, 46, and 47. These estimates exclude employment in "miscellaneous" correctional agencies, 1980-85: NPA Projections (see text and Volume VI).

[b] Estimates of total local employment by function were based on distributions of employment in 384 cities and 312 counties which represented 80 percent of total local corrections employment.

TABLE II-19

DETAILED OCCUPATIONAL DISTRIBUTION OF EMPLOYMENT IN STATE ADULT FACILITIES, 1962 and 1974

	Number of Full-Time and Part-Time Employees		Percent Change	Inmate-Staff Ratio	
	1962	1974		1962	1974
Total	43,793	60,604	38	4.5	3.1
Wardens and Assistant Wardens	749	1,141	52	261	167
Custodial Officers	27,614	38,157	38	7.1	4.9
Treatment and Specialists	3,106	6,429	107	63.2	29.6
Social Workers	546	1,341	146	359	142
Psychologists	159	365	129	1233	521
Psychiatrists	95	281	195	2063	676
Teachers	1,440	2,861	199	136	66
Doctors	533	614	14	386	309
Nurses	333	967	190	588	197
Other Personnel	12,923	14,268	10	15.2	13.3

Sources: *Census-LEAA, Census of Corrections Facilities*, 1974, unpublished data; Federal Bureau of Prisons, National Prisoner Statistics Series, *Personnel in State Federal Prisons*, 1962.

tional and medical personnel, increased their share of total employment (full-time and part-time) from 7.1 percent in 1962 to 10.6 percent in 1974. Custodial personnel accounted for the same proportion of total employees in both years (63 percent) while the proportion of personnel in other occupations (clerical, support services, etc.) declined from 30 percent to 24 percent.

A continuation of these trends was assumed in the occupational projections to 1985. This assumption was supported by responses of wardens to the NMS executive survey. These executives indicated that they expected custodial employment to increase at about the same rate as total employment in 1975-76, but expected employment of treatment personnel to increase at almost twice the overall rate. The resulting occupational projections for 1980 and 1985 are presented in Table II-20 which are adjusted to the employment levels reported in the LEAA Census Expenditure and Employment survey for 1974.

b. Local Adult Institutions. Estimates of the 1974 occupational distribution of employees of local jails were based primarily on data from the Census Employee Characteristics Survey, supplemented--in the case of support personnel--by statistics from the 1973 Census of Jails. Since reliable occupational trend data were not available, the 1974 occupational distribution was applied to projected total jail employment to yield estimates for 1980 and 1985 (Table II-21).

c. Juvenile Institutions. In 1971, 61 percent of total juvenile institutional employment was in closed institutions such as training schools, and 23 percent was in detention centers. Based on comparisons of Census data for 1971 and 1973, offender populations in these agencies were decreasing at an extremely rapid rate of 11 percent annually, between these years, while the number of juveniles in half-way houses and group homes increased by over 50 percent, and employment in the latter agencies doubled. Collateral data, re-

TABLE II-20

PROJECTED EMPLOYMENT IN STATE ADULT CORRECTIONS FACILITIES, BY MAJOR OCCUPATION GROUP: 1974-1985

(Full-time Equivalent Employees)

Occupational Group	1974[a]	1980	1985	Percent Change, 1974-85
Total	66,000	90,000	104,000	58%
Managerial	1,300	1,900	2,100	62
Custodial Officers	42,000	56,500	65,900	63
Treatment and Training Specialists	6,800	11,700	15,700	131
Other Personnel	15,900	19,900	20,300	28

[a] Source: 1974 distribution of employment was derived by applying the occupational distribution of employment from Census/LEAA, Census of State Correctional Facilities; to the estimated 1974 full-time equivalent employment from the Census/LEAA, Employment and Expenditures Data for the Criminal Justice System, 1973-74. Employment totals in the latter source are not comparable with those reported in the Census of State Correction facilities, as shown in Table II-21.

TABLE II-21

DISTRIBUTION OF EMPLOYMENT IN LOCAL ADULT CORRECTIONAL INSTITUTIONS 1974, 1980, 1985

	Full-Time Equivalent			Percent Distribution
	1974	1980	1985	
Total	40,000[a]	55,000	63,000	100.0[b]
Management	2,160	2,970	3,402	5.4
Custodial	23,520	37,840	43,340	68.8
Treatment	2,600	3,580	4,090	6.5
Other	7,700	10,610	12,160	19.3[b]

[a] Total employment estimated from LEAA/Census, Expenditures and Employment Data for Criminal Justice Activities, 1974.

[b] Estimate of percent of support personnel based on the 1973 Census of Local Jails. Distribution of employment among other occupational groups based on the Census Employee Characteristics Survey, 1974.

viewed in Volume III, Chapter III, indicated a continued shift from state training centers to community-based programs. The NMS has thus assumed that employment in state training schools and facilities will decline from 58 percent of total juvenile corrections employment in 1974, to 35 percent to 1985 (Table II-22).

This estimate assumes that approximately one-fourth of existing training schools will cease operation by 1985. In the light of recent patterns of deinstitutionalization, this is a realistic, if not conservative, assumption. It is further assumed that, with the expected proliferation of smaller, less secure locally-based agencies, the reception and screening process will become more essential to the success and community acceptance of such facilities and programs. Therefore, modest growth in employment for the reception and diagnostic function is projected. The bulk of the growth in employment in juvenile institutions is expected in community-based, minimum security facilities, and in associated programs.

TABLE II-22

DISTRIBUTION OF EMPLOYMENT IN STATE AND LOCAL JUVENILE FACILITIES, BY TYPE OF JUVENILE FACILITY: ACTUAL, 1971, 1974; PROJECTED, 1980, 1985

	Actual		Projected	
	1971	1974	1980	1985
Detention Facilities	23%	26%	23%	20%
Training Schools	61	58	45	35
Reception Centers	6	5	8	10
Community-Based and Minimum Security Facilities and Programs	9	11	24	35

Note: Detail may not add to 100 due to rounding.
Source: LEAA/Census, Children in Custody, 1971 and 1973, unpublished data; NMS Projections Model.

The projected shift from training schools to community-based facilities and programs implies a greater reliance on existing community resources to provide medical and educational services. Based on comparisons of occupational staffing by agency type (Table II-23), the latter agencies utilized higher proportions of treatment and of administrative personnel and smaller proportions of child care workers and support personnel than the state training centers. The resulting projections thus indicate a greater-than-average growth for both administration/management and treatment personnel, with low net employment growth for child care workers and a reduction for support personnel (Table II-24).

d. Probation and Parole. Based on responses to the NMS Survey of Probation and Parole Executives in 1975, nearly one-half of all employees of these agencies were line probation and parole officers, about one-eighth were in managerial or supervisory positions, and nearly two-fifths were clerical personnel, paraprofessionals, or in other support positions (Table II-25).

Available evidence indicates that employment of support personnel in these agencies is increasing much more rapidly than line probation and parole officers. Between 1971 and 1974, total employment of probation and parole agencies increased at twice the annual rate as employment of probation and parole officers. Moreover, executives responding to the NMS survey indicated that they expected that, as compared to a projected increase of 20 percent in total staff in 1975-76, employment of probation and parole officers in their agencies would increase by only 5 percent.

TABLE II-23

OCCUPATIONAL DISTRIBUTION OF EMPLOYMENT IN JUVENILE INSTITUTIONS BY TYPE OF AGENCY, 1973

	Detention Center	Training Schools	Reception Center	Half-way houses, Group houses, Forest camps, etc.
Total	100%	100%	100%	100%
Administration	13	11	14	16
Child Care	47	40	17	30
Treatment	27	32	28	41
Other	13	17	11	13

Source: LEAA/Census, Children in Custody: A Report on the Juvenile Detention and Correctional Facility Census (Washington, D.C.).

TABLE II-24

PROJECTED DISTRIBUTION OF JUVENILE CORRECTIONS EMPLOYMENT BY OCCUPATION GROUPS

	Estimated 1974	Projected 1980	Projected 1985	Percent Change 1974-1985
Total	43,000	47,000	48,000	12
Administration	4,800	6,100	6,500	35
Child Care	17,800	18,700	19,100	7
Treatment	13,100	15,400	16,000	22
Other	7,600	6,900	6,400	-16

Note: The 1974 estimated distribution of juvenile corrections employment was derived by applying the occupation employment distribution from LEAA/Census, Children in Custody, 1973 unpublished data, to the estimated total full-time equivalent employment derived from LEAA/Census, Expenditures and Employment Data for the Criminal Justice System, 1974.

TABLE II-25

OCCUPATIONAL DISTRIBUTION OF STATE AND LOCAL PROBATION AND PAROLE EMPLOYMENT
ACTUAL: 1974; PROJECTED: 1980, 1985

	Full-time Equivalent Employment (in thousands)			
	1974	1980	1985	Percent Change, 1974-85
Total	46.0	75.0	96.0	109%
Managers and Supervisors	6.0	9.8	12.6	110
Probation and parole Officers	22.5	29.8	34.2	52
Other, including case aides	17.5	35.4	49.2	181

Note: 1974 employment by occupational group estimated by applying the estimated occupation distribution from NMS surveys of probation and parole, to total employment, based on LEAA/Census, Expenditures and Employment Data for the Criminal Justice System, 1974.

The projections of probation and parole employment thus provide that, as compared with an overall increase of 109 percent between 1974 and 1985, employment of probation and parole officers will increase about 52 percent, while support personnel will increase by about 181 percent (Table II-25).

E. PROJECTIONS OF PERSONNEL TURNOVER AND RECRUITMENT NEEDS IN KEY OCCUPATION

This section describes the procedures used to project personnel turnover rates and recruitment needs in seven key law enforcement and criminal justice occupations: sworn police officers, custodial officers, child care workers, probation and parole officers, assistant prosecutors, defenders and judges. These are the major "line occupations" in each of the sectors of the criminal justice system and account for a large proportion of specialized training requirements in their respective agencies.

An initial step in these projections was the development of estimates of personnel attrition, or separation, rates for each of these occupations in a "base" year. Such data had not previously been compiled on a systematic basis for this purpose. The NMS surveys of law enforcement and criminal justice executives, conducted in late 1975, included questions on employment, voluntary resignations and recruitment of personnel in these occupations (other than judges) during fiscal year 1974. The latter period was selected, rather than 1975, on the assumption that the high rates of unemployment in 1975 had substantially reduced personnel turnover, hence making it an unrepresentative period for projection purposes. This assumption was subsequently verified in the course of NMS field visits to agencies in ten states. In almost all instances, personnel officials confirmed that turnover rates had declined, as a result of the generally unfavorable labor market situation.

Death and retirement rates for all occupations other than sworn police officers and judges were computed based on BLS estimates of average death and retirement rates, by age group, in the labor force as a whole, and on Census Bureau statistics of the age distribution of personnel in each occupation.

For police officers, whose pension plans generally provide for regular retirement after 20 or 25 year of service at minimum ages between 50 and 55, this procedure was modified to allow for higher-than-average retirements, after age 50, based on unpublished statistics on occupational transfers of retirements compiled by the Bureau of Labor Statistics from a 3 percent sample of the 1970 Census of Population. These included estimates of separations of police officers from the police occupation between 1965 and 1970, and separately identified those employed in other occupations in 1970 and those who had retired from the labor force by the latter year. The latter source was also used as a basis for estimating separation rates for judges, who were identified as a separate occupation in the 1970 Census.

The resulting estimates of personnel separation rates in 1974 are shown in the first three columns of Table II-26. These estimates may slightly understate total attrition rates in that year because they do not include any explicit estimate of separations for reasons other than voluntary resignations, retirements and deaths, such as dismissals for cause. However, the latter separation rates are believed to be quite low, in the occupations under review, and often tend to be classified as voluntary resignations in personnel records.

A partial check on the reasonableness of the resulting separation rate estimates was available for two of these seven occupations--sworn police officers and custodial officers--from reports submitted by state and local governments to the Equal Employment Opportunity Commission (EEOC) in 1973 and 1974. These reports included data on employment and recruitment by occupation in law enforcement and correctional agencies. One of the occupational

TABLE II-26

PERSONNEL TURNOVER RATES IN SELECTED CRIMINAL JUSTICE OCCUPATIONS: ACTUAL, 1974; PROJECTED, 1975-85

	1974[a]			1975-80[b]			1980-85[b]		
	Total	Voluntary Resignations	Deaths and Retirements	Total	Voluntary Resignations	Deaths and Retirements	Total	Voluntary Resignations	Deaths and Retirements
Sworn Police Protection Officers	10.8	9.3	1.5	7.9	6.4	1.5	9.4	7.9	1.5
Custodial Officers, State Adult Institutions	20.6	19.1	1.5	14.4	12.9	1.5	17.2	15.7	1.5
Probation/Parole Officers	13.9	12.8	1.1	9.8	8.7	1.1	11.6	10.5	1.1
Child Care Workers	29.0	12.8	1.8	20.2	18.4	1.8	25.1	22.3	1.8
Prosecutors	23.1	22.1	1.0	19.4	18.4	1.0	21.0	20.0	1.0
Defenders	23.0	22.3	.7	19.4	18.7	.7	21.0	20.3	.7
Judges	6.9	2.0	4.9	6.9	2.0	4.9	6.9	2.0	4.9

[a] Voluntary resignation rates in 1974 for occupations other than judges are weighted medians, based on responses to the NMS Executive Surveys, 1975. Death and retirement rates by age group are from the U.S. Bureau of Labor Statistics, Length of Working Life for Men and Women, 1970, Special Labor Force Report 187; and from unpublished BLS tabulations of occupational transfers and retirements, by age group, between 1965 and 1970, based on a 3 percent sample of the 1970 Census of Population. The latter source was also used for estimates of personnel turnover of judges. Rates derived from these sources were applied to the age distribution of personnel in each occupation, other than judges, from the Census Employee Characteristics Survey, 1974.

[b] NMS projections, see text.

groups specified, "protective service workers," corresponds to personnel in line police and line custodial officer positions. The EEOC reports did not include direct information on personnel separations. However, estimates of personnel separation rates during FY 1974 were derived by comparisons of net employment changes and of recruitment, by occupation, for those agencies submitting reports for both 1973 and 1974. The estimated total separation rates, based on the EEOC reports, are compared below with those estimated in Table II-26.

	Estimated FY 1974 Separation Rates	
	EEOC Reports	NMS Estimates
Police Officers	10.4	10.8
Custodial Officers	21.7	20.6

The relatively small differences between the separation rates derived from these two sources are the net result of differences in occupational classifications, in agency coverage and in estimation and reporting procedures. The close correspondence between the two sets of estimates, allowing for these factors, provides confirmation that the NMS estimates are a reasonable point of departure for the projection of personnel turnover in all of the key occupations.

In projecting personnel separation rates for 1975-85, allowance was made for the fact that voluntary resignations or quit rates normally rise during periods of prosperity and tend to be much lower during periods of high unemployment. An NMS analysis of quit rates of manufacturing employees for the period 1956-1975 indicated that, on the average, a 10 percent increase in the unemployment rate was accompanied by an 8 percent reduction in the quit rate. Since the average levels of unemployment projected for the period 1975-80 are assumed to be substantially higher than those experienced in FY 1974, corresponding reductions (based on this regression relationship) were made in the projected voluntary separation rates for all key occupations, other than judges. Somewhat higher quit rates were, in turn, projected for the period 1980-85 based on the assumed reduction in unemployment during this period, but these are still expected to be lower, on the average, than during FY 1974. No change was made in the estimates of death and retirement rates for the projection period. The resulting projections of separation rates are shown in Table II-26.

Projected recruitment needs in each of the key occupations have, in turn, been derived in Table II-27, based on the estimated separation rates and on projected employment trends in these occupations. Our projections indicate a considerable reduction in annual recruitment needs during 1975-80, as compared to estimated 1974 levels, in all occupations. Replacement needs--which account for a major proportion of new hires in all of these occupations--will decline substantially in all occupations, other than judges, as a result of the projected reduction in personnel turnover. Personnel recruitment needs for employment growth are also projected to be lower in all occupations, other than prosecutors. In turn, recruitment needs in 1980-85 are projected at a somewhat higher level than in 1975-80 primarily because of the projected increases in turnover, under improved labor market conditions.

TABLE II-27

ESTIMATED ANNUAL RECRUITMENT NEEDS IN SELECTED CRIMINAL JUSTICE OCCUPATIONS: ACTUAL, FY 1974; PROJECTED, 1975-80 AND 1980-85

Occupation	Actual, FY 1974[a]	Projected (Annual Average)	
		1975-80	1980-85
Sworn Police Officers			
Total Recruitment Needs	61,700	50,400	56,400
Replacements	45,600	37,000	48,900
Growth	16,100	13,400	7,500
Custodial Officers, State Institutions			
Total Recruitment Needs	13,400	9,500	12,400
Replacements	8,600	7,100	10,500
Growth	4,800	2,400	1,900
Child Care Workers			
Total Recruitment Needs	6,000	3,900	4,700
Replacements	5,200	3,700	4,600
Growth	800	200	100
Probation and Parole Officers			
Total Recruitment Needs	4,800	3,800	4,600
Replacements	3,100	2,600	3,700
Growth	1,700	1,200	900
Prosecutors			
Total Recruitment Needs	7,200	6,700	9,600
Replacements	5,100	4,400	1,600
Growth	2,100	2,300	8,000
Defenders			
Total Recruitment Needs	1,200	1,000	1,400
Replacements	800	800	1,100
Growth	400	200	300
Judges[b]			
Total Recruitment Needs	700	500	600
Replacements	400	400	500
Growth	300	100	100

---

[a] Estimates for FY 1974, except for judges, based on NMS Executive Survey, 1975. Estimated employment growth for judges based on average annual growth in employment of judges of 4.9% for the period 1970-74, from Council of State Governments, State Court Systems, 1970, 1974.

[b] Estimates are for general jurisdiction and state appellate courts only.

F. PROJECTIONS OF MANPOWER TRAINING NEEDS

One of the important applications of manpower projections is in the planning of training and educational programs. Decisions concerning investment by public agencies in facilities and staffs for provision of training logically require an assessment of the future, as well as current demand for such training. This will, in turn, depend upon expectations concerning future recruitment and employment levels in the relevant agencies and occupations, and on the amount and types of training to be provided.

A necessary condition for development of training needs projections is the existence of standards or criteria specifying--in quantifiable form--the categories of personnel to be trained, the length of such training and the frequency of training. A number of recommendations for such standards were included in the report of the National Advisory Commission on Criminal Justice Standards and Goals (NAC). In addition, state level training standards for certain line occupations have been promulgated, either by legislation or administrative action, in a considerable number of states. Requirements for certain minimal levels of training have been most frequently specified for entry-level training of police officers and, to a lesser extent, for correctional officers in state institutions. They have been much less frequent in other line occupations, particularly in the courts sector. There is concensus concerning the need for both entry-level and in-service training in such occupations as prosecutor, defender, and judge--as well as for professional personnel in other specialized criminal justice occupations. However, the usefulness and relevance of any simple quantitative yardstick, such as a minimum number of course hours or weeks for such occupations, has been questioned by many of the training officials consulted by the NMS, in part because such standards fail to allow for numerous variables, such as differences in agency functions and job structures and in the prior experience and educational background of prospective trainees.

These considerations are less relevant in the case of line personnel, such as line police officers and correctional officers in state institutions, since the basic task requirements for these positions tend to be more consistent, and since a very large proportion of all entrants into these positions are personnel without prior specialized education or experience. Moreover, training programs for these personnel have become more institutionalized, hence providing a more reliable data base for estimation and projection of training requirements.

The point of departure for this analysis was development of estimates of the magnitude of entry-level training provided to entrants into sworn police officer positions, in municipal and state police agencies, and into correctional officer positions in state institutions for adults (Table II-28). Estimates of annual recruitment for these occupations, by size of agency in FY 1974, were based on the accession rates for that year, as reported in the NMS executive surveys, and on total estimated employment in these occupations. The statistics on the average number of hours of training per recruit, by agency size, were derived from the NMS survey reports, which described current agency training practices as of 1975, and are averages including an allowance for the small proportion of agencies which provide no formal entry-level training. The number of entry-level trainee hours, in turn, is the product of the average number of training hours per recruit and the numbers actually recruited in FY 1974, without any allowance for training attrition. Thus, the "actual" trainee hours is a measure of the total number of course/student hours of training provided to new police and correctional officers who were

TABLE II-28

ESTIMATED ENTRY-LEVEL TRAINEE HOURS FOR POLICE OFFICERS AND FOR CORRECTIONAL OFFICERS IN STATE INSTITUTIONS, BY SIZE OF AGENCY, ACTUAL AND REQUIRED UNDER RECOMMENDED MINIMUM STANDARDS: FY 1974

Agency Size (Total Employees)	Estimated Number of Recruits FY 1974	Entry-Level Trainee Hours				
		Actual		Required		Percent Increase Required
		Total Hours (000)	Average Per Recruit	Total Hours (000)	Average Per Recruit	
Police Officers[a]						
Total	44,600	16,250	364	21,288	477	31.0
400 or more	12,200	7,121	584	7,258	595	1.9
75-399	6,900	2,769	401	3,213	466	16.1
25-74	4,900	1,756	358	2,189	447	24.6
Less than 25	20,600	4,604	223	8,629	419	87.4
Correctional Officers						
Total	13,400	1,422	106	1,835	137	29.1
400 or more	5,400	575	106	732	136	27.3
75-149	4,600	570	124	679	148	19.1
25-74	1,100	103	94	139	139	29.0
Less than 25	1,300	66	51	144	111	118.4

[a] Excludes sheriffs and other county law enforcement officers.

Sources: Estimated number of recruits, FY 1974, and estimated actual training hours from NMS Executive Surveys, 1975 (weighted averages).

Required training hours based on minimum standard of 400 hours for police officers and of 100 hours for correctional officers, recommended by the National Advisory Commission on Criminal Justice Standards and Goals. Assumes maintenance of current course lengths for all agencies meeting or exceeding these standards.

recruited in FY 1974 and whose training was, in large part, completed in the period FY 1974-75.

An inspection of the data on average hours of training per recruit indicated wide variations by agency size, with the larger agencies generally providing substantially longer periods of training than small agencies. In addition, there were considerable variations in length of training among agencies within each size group. The NAC report had proposed a standard providing for a minimum of 400 hours of training for police recruits, and 100 hours of training for correctional officer recruits. This standard was used as a guide in estimating the "required" number of trainee hours for all agencies providing less than these amounts of training, while assuming no change in current practice for those agencies equalling or exceeding these course length standards. As shown in Table II-30, adoption of these minimum standards by all agencies would have required an increase of 31 percent in trainee hours for FY 1974 police recruits, and of 29 percent for correctional officer recruits. In the case of police recruits, about 80 percent of the "deficit" of about 5 million trainee hours, based on this standard, was concentrated in the very small agencies with fewer than 25 employees. For correctional officers, the corresponding deficit of about 400,000 training hours was more broadly distributed, by agency size, although it was proportionately highest among the very small correctional agencies.

Any estimate of this type, based on application of a single quantitative national standard such as course length, must be interpreted with considerable caution. To illustrate, the very small police and correctional agencies with fewer than 25 employees reported the highest personnel turnover rates and also made more extensive use of part-time employees in police and correctional officer positions. Since the latter agencies also tended to have a more limited range of functions than did larger police departments or correctional institutions, some differential in length of training provided by these small agencies--and greater reliance upon on-the-job and in-service training programs--may be prudent and desirable, from a management standpoint. Using this perspective, the substantial training deficits reported by the medium-size and large correctional institutions, in relation to the modest standard of 100 hours of entry training, may provide a more important indicator of training needs than the overall averages for all agency sizes.

In Table II-29, average annual training requirements for these two occupations have been projected for the periods 1975-80 and 1980-85, based on the NMS projections of employment and recruitment needs. These have been estimated both under an assumption that the average training hours per recruit, as of FY 1974, would remain unchanged, and on the basis of the higher average training hours needed to raise all agencies to the proposed minimum course lengths of 400 and 100 hours for police and correctional officers, respectively. These projections have also been expressed as an index, based on actual trainee hours in FY 1974. The projections have several important implications for planning of police and correctional officer training programs.

- The reduced volume of annual recruitment projected for the coming decade, as compared with actual FY 1974 levels, would result in significant reductions in overall entry-level training programs, if no change were made in prevailing course lengths and training policies. The greater relative reduction projected for correctional officers than for police officers, results from the fact that personnel turnover rates were about three times as high for correctional officers as police officers in FY 1974, and hence accounted for a greater portion of total annual training requirements in the

TABLE II-29

ACTUAL AND PROJECTED ANNUAL ENTRY-LEVEL TRAINEE HOURS FOR POLICE OFFICERS AND CORRECTIONAL OFFICERS IN STATE INSTITUTIONS: FY 1974, 1975-80, 1980-85

	Annual Number of Recruits	Trainee Hours			
		Based on Actual Agency Standards		Based on Recommended Minimum Standards	
		Number (000)	Index (Actual 1974=000)	Number (000)	Index (Actual, 1974=000)
Police Officers[a]					
Actual:					
FY 1974	44,600	16,250	100	21,288	131
Projected:					
1975-80	36,200	13,177	81	17,267	106
1980-85	38,100	13,868	85	18,174	112
Correctional Officers					
Actual:					
FY 1974	13,400	1,422	100	1,835	129
Projected:					
1975-80	9,500	1,007	71	1,302	92
1980-85	12,400	1,314	92	1,699	119

[a] Exclude sheriffs and other county law enforcement officers.

Sources: Actual data for FY 1974 from NMS Executive Surveys (see Volume II, Table VI-6). Projected trainee hours based on averages per recruit under actual and "required" standards. as shown in Table II- 30 of this chapter and on projected annual number of recruits for each period.

former occupation. The projected reduction in turnover rates for the 1975-80 period, therefore, had a greater impact upon projected total recruitment and training needs for correctional officers than did the projected requirement for continued growth in total correctional officer employment.

- In view of the projected reduction in number of recruits, the period 1975-80 can provide an opportunity for many agencies to improve the quality of both recruit and in-service training programs, without necessarily increasing overall trainee loads. Thus, the estimates in the right-hand column of Table II-29 indicate that the adoption of NAC-recommended minimum standards by agencies now below these standards could be accomplished in 1975-80, concurrent with a reduction of 8 percent in aggregate trainee hours for correctional officers, and with an increase of only 6 percent for police officers. These, of course, are national-level estimates and do not allow for the wide variations in recruitment and training needs among individual states.

- Finally, the projection for the period 1980-85 (based on an assumed return to a high employment economy) does indicate a significant increase in recruitment and training needs, particularly for correctional officers. This increase results both from the projected increase in turnover rates under these conditions, and from the fact that the NMS projections indicate a much more rapid growth in employment of correctional officers than of sworn police officers during this period.

CHAPTER II

FOOTNOTES

1. The elasticities cited here are short-run estimates derived directly from the parameters of the estimated equation. They are to be interpreted as, on the average, the expected percentage change in the specified variable due to a 1 percent change in another variable. The short-run estimates are meant to reflect the yearly changes attributable to changes in certain exogenous variables. It should be noted that since the model is a disequilibrium model, including lagged sector employment variables, a change in an exogenous variable in any given year will not only have an effect on employment in that year, but also in subsequent years. Thus, the long-run elasticities shown in the technical appendix were estimated by solving the equations to develop an adjustment factor; the details of the process are presented in Appendix A. The long-run elasticities differ from the short-run because they capture the effect of the interactions of the system over time to changes in exogenous variables.

2. For a description of this methodology, see Tomorrow's Manpower Needs, U.S. Bureau of Labor Statistics, Bulletin No. 1606, February 1969.

3. National Association of Attorneys General, Survey of Local Prosecutors, 1973.

4. FBI, Uniform Crime Report, 1974. Table 24; Projections from NMS model.

5. NAAG, Office of the Attorney General; Organization, Budget, Salaries, and Staff, 1974.

6. NAAG, Office of the Attorney General; Organization, Budget, Salaries, and Staff, 1971-1974.

CHAPTER III. MAINTAINING AND UPDATING THE NMS MODEL

A. INTRODUCTION

Any system for projecting complex variables, such as criminal justice workloads and employment, requires periodic updating if it is to serve as a tool for planning and decision-making. Such revisions are needed for several reasons: (1) to incorporate new trend data on the key criminal justice system variables being projected; (2) to modify the projections of the exogenous variables which "drive" the model, based on more recent experience and on revised assessments of future economic and social trends; and (3) to make structural revisions in the basic model framework and the related system of estimating equations as new analytical methods of data sources are developed.

One of the tasks of the National Manpower Survey was to provide procedures for application by a user agency, i.e., LEAA, in periodic revision and updating of the NMS national-level projections. Appendix B includes a Users' Guide which describes the technical procedures and programming routines to be followed for use in periodic updating or revision of the model. These provide for incorporation of new data as well as for the revision of the exogenous projection variables in the national model--rather than for any structural revision in the projections system itself.

These procedures require periodic collection of data on the relevant variables, either from existing ongoing statistical programs or through new or modified data collection systems. This chapter describes the data sources currently available for this purpose. It discusses options for new data collection and identifies sources of information for use in projection of the exogenous variables of the model.

B. SOURCES OF CRIMINAL JUSTICE SYSTEM DATA

The following categories of criminal justice data are required for updating the NMS Model.

1. Aggregate employment and expenditures data by sector
2. Occupational employment data by sector
3. Wage or earnings data by sector
4. Personnel turnover data for key occupations
5. Selected criminal justice workload data--crimes, arrests, and prison populations

The requirements for item (1), aggregate employment and expenditures data, are met by the annual Census/LEAA publication, Expenditures and Employment Data for the Criminal Justice System. This statistical publication, issued annually since the late 1960's, provides comprehensive data on criminal justice expenditures, payrolls, and employment, by level of government and state, for each major sector of the criminal justice system. The payroll and employment data can also be used to compute average annual earnings for personnel by sector.

Unfortunately, there is no other single systematic compilation which provides equally comprehensive data for the other major data input requirements listed above. Table III-1 identifies the available national-level data sources, used by the NMS project, either to provide inputs to the NMS model or for related assessment of manpower needs. Only a limited number of these data sources, such as the FBI Uniform Crime Reports and the Census

TABLE III-1
SUMMARY OF CRIMINAL JUSTICE DATA SOURCES

Necessary Data Item	Police		Judicial		Prosecution		Indigent Defense		Corrections	
	Source	Type	Source	Type	Source	Type	Source	Type	Source	Type
Aggregate Employment and Expenditure[1]	1) Census of Gov't-Hist (S&L, 1930-72) 2) FBI-UCR (S&L, 1950-75) 3) Survey of Gov't-PE (S&L) 4) FOP-(cities only) 5) KC (cities only) 6) IACP (state only) 7) EEOC (S&L, 1973-74)	H O O O H O O	No source of aggregate employment data other than LEAA, Expenditure & Employment data.		1) NAAG, COAG (state only, 1971-75) 2) NAAG, Loc. Pros. 1971,73)	O P, NE	1) No source of aggregate employment other than LEAA, Expenditure & Employment		1) Survey of Gov't-PE (S&L) 2) Census/LEAA-(CSCF, (1961,62,74) 3) Census/LEAA-Jails (1970,73) 4) Census/LEAA-Juv (1971,73) 5) JCCMT-(1967) 6) NCCD-Corrections (1967)	O P P P I I
Occupational Data:	1) EEOC (S&L, 1973-74) broad functional categories 2) KC-(cities only) employment by rank 3) DEC, CEN	O, NE H O	1) COSG (1970, 74) employment of judges in appellate and general jurisdiction courts 2) LEAA-court org. (1971) data on judges only	P P	1) NAAG, COAG-(state by state data on employment of attorneys, investigators, & clerical personnel in Attorney General Offices 2) No series on occupational employment in local prosecution agencies	O	1) NLADA, IDSA (1974) (1974) national estimate of employment of defenders	I,NE	1) Same as above 2) NCCD-P&P Dir.	 O

[1] Criminal justice expenditure data available from LEAA, Census, Expenditure and Employment Data for the Criminal Justice System. Expenditure for police protection and corrections also available from Census, Governmental Finance.

Key to abbreviations: H=historical data only; O=ongoing regularly scheduled series; I=isolated, one-time survey or report; P=periodic survey or publication on no regular schedule; S&L=data for state and local governments; NE=national estimates only are available from published sources.

TABLE III-1

SUMMARY OF CRIMINAL JUSTICE DATA SOURCES
(continued)

Necessary Data Item	Police		Judicial		Prosecution		Indigent Defense		Corrections	
	Source	Type	Source	Type	Source	Type	Source	Type	Source	Type
Wage and Earnings[2]	1) FOP (min/max) 2) ICMA (min/max) 3) IACP (state only min/max) 4) KC 5) EEOC 6) Survey of govt.-PE (average earnings)	O O O H O,NE	1) COSG (1970, 1974) state by state salary data	P	1) NAAG, COAG (state only, 1971-75) salaries by experience level 2) NAAG, Loc. Pros (1971,73)	O P	No current data on salary or wages		1) Survey of gov't-PE (average earnings of corrections employees 2) Census/LEAA-CSCF (unpublished data)	O P
Turnover	1) EEOC-turnover estimates can be derived from unpublished computerized data 2) BLS-Census-job change death, retirement, transfer, and resignation rates, unpublished data	 I	BLS-Census-job change (1965&70) death, retirement and quit rates, unpublished data	I	No available turnover data		No available turnover data		1) EEOC-turnover estimates, can be derived from unpublished data 2) JCCMT-1969, turnover rates for correctional officers	O O
Workload:	1) FBI-UCR (S&L) crime 2) FBI-UCR, arrests state data available from unpublished data	O NE							1) NPS-(state only 19-1975 prison population 2)NCCD-corrections (1967) estimated workload in various types of agencies	O I,NE
									) Census/LEAA-jails inmates in local jails) Census/LEAA-Juv-children in institutions	

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[2] LEAA, Census, Expenditures and Employment Data provides employment and payroll data for use in deriving average earnings for each sector.

TABLE III-1

1. Belkin, Jacob, A. Blumstein, and W. Glass, "JUSSIM, An Interactive Computer Program for Analysis of Criminal Justice Systems," Urban Systems Institute; Carnegie-Mellon University, 1971.

2. Project SEARCH, "The Development and Implementation of Offender Based Transaction Statistics System under Project Search"; Technical reports No. 3, "Designing Statewide Criminal Justice Statistics Systems," November 1970; No. 4, "Implementary Statewide Criminal Justice Statistics Systems" June 1972"; No. 5, "An Evaluation of the Five State Implementations".

3. Laison, Richard, Models for the Allocation of Urban Police Patrol Forces, Technical Report No. 44, Cambridge, Massachusetts, 1969, MIT Operations Research Center.

EXPLANATION OF SOURCES

Census-EC:	Census Employee Charactdristics Survey, 1974, source of data on characteristic of occupants of key criminal justice occupation. Data as yet unpublished by Census.
Census/LEAA-CSCF:	Census of State Correctional Facilities, 1974, contains data based on response of 592 correctional facilities which can be disaggregated to a state level. Occupational data as yet unpublished.
Census/LEAA- Juv	Children in Custody, Census of Juvenile Corrections Institutions conducted in 1971, and 1973. Occupational data for 1973, as yet unpublished. Provides state-by-state estimates of juvenile inmate populations and employment by occupation.
Census/LEAA-Jails:	The Nation's Jails, Census of local correctional facilities, provides data on inmates and staffing, 1970, and 1973 at the state level.
Census of Governments/Historical:	Census of Governments, 1972, Vol 6. Topical Studies No. 4: Historical Statistics on Governmental Finances and Employment provides a time series on police employment (1953-1972), expenditures on corrections (1952-1972), and total expenditures and employment by state and local governments. Historical series on police employment is provided on a state-by-state basis for years 1953-72.
COSG:	Council of State Governments, State Court Systems, 1970, and 1974. Provides estimate of the number of judges in general jurisdiction and appellate courts, and salaries on a state-by-state basis.

DEC.CENSUS:	The Decennial Census provides occupational data for the following criminal justice occupations: Police and detectives, lawyers and judges, guards and watchmen, and sheriffs and bailiffs.
EEOC:	Equal Employment Opportunity Commission, Minorities and Women in State and Local Governments, survey began in 1973 and is issued annually. Publication provides national estimates of employment by broad occupational category and selected characteristics of personnel in each category.
FBI-UCR:	Federal Bureau of Investigation, Uniform Crime Reports, annual publication with statistics on crime, arrests and employment of sworn and nonsworn police personnel.
FOP:	Fraternal Order of Police, Survey of Salaries and Working Conditions of the Police Departments in the United States, annual survey with data reported for individual police departments with data on a number of uniformed officers, and salaries for city, selected county, and state departments.
IACP:	International Association of Chiefs of Police, Comparative Data Reports, annual report containing employment, salary, and organizational statistics on state police departments and highway patrol.
ICMA:	International City Managers Association, Municipal Yearbooks, annual report of salaries of police officers in cities over 100,000 population.
JCCMT:	Joint Commission on Correctional Manpower and Training, 1967, published national estimates of corrections employment. State by state data available from its unpublished data.

KC:	Kansas City Police Department, Survey of Municipal Police Departments, contains data for police departments in cities of 300,000 to 1,000,000 population on budget, employment, salaries, and benefits.
LEAA-Court:	Survey of Court Organization, 1971 contains data on the number of judgeships, and description of the organization of the court systems. A 1974 update of description of the system has been published.
NAAG, COAG:	National Association of Attorneys General, Committee on the Office of Attorney General, The Office of Attorney General: Organization, Budget, Salaries, and Staff, annual report, beginning in 1971 (under a different title) which provides data on the number of attorneys, investigators, and clerical personnel employed in the Attorneys General's Offices in each state; salary data; and organizational information.
NAAG-Loc. Pros.:	National Association of Attorneys General, Survey of Local Prosecutors, 1971, 1973.
NCCD-Corrections:	National Council on Crime and Delinquency, Corrections in the USA, 1967 survey for the President's Task Force on Corrections. Contains information on staffing, workloads, and standards in the various corrections agencies.
NCCD-P & P Directory:	Nation Council on Crime and Delinquency, Probation and Parole Directory. Ongoing publication details the organization of state and local probation and parole agencies and lists the number of officers in the agencies by state.

NLADA-IDSA:	National Legal Aid and Defender Association, Indigent Defense Services Analysis, a 1975 survey of the nation's defender agencies.
NPS:	National Prisoner Statistics is an ongoing series which was transferred from the Bureau of Census to the Federal Bureau of Prisons in 1950 and to LEAA in 1971. The data for this series is gathered from surveys and state and federal correctional facilities, and surveys of the inmates in these facilities and include information on inmate population, admissions, releases, inmate characteristics, and staffing patterns in these institutions.
Survey of Governments-PE:	Bureau of the Census, Annual Survey of Governments, Public Employment, 1974 and prior, contains state-by-state information on employment and average earnings in public protection and corrections agencies.

Bureau's Annual Survey of Governments, are published on a regular annual schedule. Other sources listed were the results of Censuses or surveys conducted once only, to date, or on an irregular schedule. These data sources are reviewed below.

• Occupational employment--The most comprehensive source of data on the occupational distribution of the United States labor force is the decennial Census of Population. This is supplemented by the sample Current Population Survey (CPS), conducted each month by the Census Bureau, which provides summary data on occupational employment, as well as national aggregates of labor force, employment, and unemployment, based on a national sample of households. The major limitation of these Census of Population sources for analysis of employment trends in criminal justice occupations is the inadequacy of its occupational and industrial (or "type of agency") classifications. Only a few key criminal justice occupations are separately classified in these surveys, including policemen and detectives, sheriffs, and judges. Annual average employment estimates for some of those occupations are published by the Bureau of Labor Statistics, based on the CPS surveys. These annual data, however, do not separately classify employees of state and local governments, by type of agency, and are subject to considerable sampling error. Other key occupations, such as correctional officers, probation and parole officers, prosecutors and defenders, are not separately classified at all. Moreover, the broad category of "policemen and detectives" does not distinguish among those in managerial or supervisory positions, those in basic line functions and those in various support functions.

The annual surveys of employment in state and local governments by the Equal Employment Opportunity Commission (EEOC), initiated in 1973, provide broad occupational groupings of personnel in police protection and correctional agencies, in addition to their primary function of measuring trends in utilization of minority personnel and women in these and other state and local agencies. The major limitations of these data for use in analysis of occupational employment trends have been the broad level of occupational aggregation (corresponding to the Census "major occupation groups"), lack of differentiation between sworn and nonsworn officers, the lack of separate identification of judicial process agencies, and incomplete coverage of small agencies, generally.

Several additional sources, limited to specific criminal justice sectors, were also utilized in the analysis of past occupational trends. The annual FBI Uniform Crime Reports include statistics on total employment of sworn and nonsworn police employees for cities (by size group) and for the larger counties. Special censuses of state adult and juvenile correctional facilities, and of local jails, have been conducted at irregular intervals in recent years. These include occupational employment data for these agencies. In addition, the NCCD has published directories of probation and parole officers at irregular intervals, which include employment data for this occupation. If the correctional agency censuses and the probation and parole directory are repeated at reasonably frequent intervals in the future, they will provide most of the essential occupational data for these agency categories.

In the judicial process sector, however, the only recurring national statistics available are with respect to the number of judgeships or judges. No statistics on occupational staffing of prosecution and indigent defense agencies are available on a periodic basis, nor are there any recurring sources of data on employment of nonjudicial personnel in the courts by occupation.

In summary, a composite of several survey or census sources can provide trend data for a number of key correctional occupations, and for aggregate employment of sworn and nonsworn police officers, provided that these surveys are conducted at periodic intervals in the future. The most critical gaps consist of the absence of occupational detail for police protection employees and for court, prosecution, and indigent defense agencies.

- Personnel Turnover Data--Current data on personnel turnover rates in key occupations are a critical element in any projection of personnel recrutiment and training requirements, particularly since such rates are likely to fluctuate considerably in relation to changes in labor market conditions and other factors. The only periodic data source for this purpose consists of data on new hires, by occupational group, which have been included in the EEOC reports beginning in FY 1974. In order to derive separation rates by occupation from these data, employment data as of the beginning and end of the fiscal year are also required. These were obtained by NMS for FY 1974, by a computerized matching of EEO-4 reports for all jurisdictions which reported police protection and correctional employment data for both years.

The data derived from this source provided estimates of separation rates and hiring rates for two key occupations: line police officers and line correctional officers. The same procedure can be used to provide data, by broad occupational group only, for other personnel in police and correctional agencies. However, this source--as noted previously--does not, at present, provide separate identification of court sector agencies, nor does it provide adequate occupational or "type of agency" detail for the police and correctional sectors.

- Wage Rate and Earnings Data--Data on annual earnings and wage rates of criminal justice employees, by sector, are used in transforming expenditures projections into estimates of aggregate employment. Average annual earnings trends, by sector, are readily derived from the annual LEAA/Census Expenditures and Employment surveys. These trends measure the combined effect of wage changes and of changes in distribution of employees, by occupation, agency type and area within each sector. For purposes of projection of future wage trends in criminal justice occupations, a separate analysis of wage or salary trends in these occupations is desirable. Reasonably adequate time series data for this purpose are only available for a limited number of occupations, at present, including police, judges, and prosecutors, as identified in Table III-1.

- Criminal Justice Workload Data--Only three criminal justice workload indicators are included in the NMS model, i.e., Part I crimes, Part I arrests, and prisoners in state institutions. These are all available in annual time series, i.e., in Uniform Crime Reports and National Prisoner Statistics.

* * *

In addition to the above data inputs required to develop updated projections of employment and recuitment in criminal justice occupations, criminal justice planning agencies also require a substantial volume of data on the current educational and training background of criminal justice employees, and on the scope or contents of current specialized criminal justice training and education programs. Such data, and related projections, were not included in the NMS Model, which was designed to project quantitative, rather than qualitative, aspects of criminal justice manpower needs. Nevertheless, they are clearly essential for purposes of planning criminal justice training and academic assistance programs.

The primary sources of such data for the present study included: (1) the Census Employee Characteristics Survey, which provided data on educational attainment and specialized training of personnel in key occupations (other than judicial); (2) the NMS surveys of criminal justice executives and agencies, which included data on agency training programs and policies in key occupations; (3) the LEAA LEEP institutional applications file, which was processed by NMS to provide data on the characteristics of institutions and programs receiving LEEP assistance; and (4) the Survey of Law Enforcement Academies conducted by the National Association of State Directors of Law Enforcement Training (NASDLET), in cooperation with the NMS. However, all of these were special one-time efforts. With the exception of the data on the LEEP institutional application forms--which would require conversion into statistical records and tabulations--there are no ongoing data collection systems designed to provide such information on a periodic basis.

C. DATA COLLECTION ALTERNATIVES

The above summary has identified a number of major statistical gaps in terms of data requirements for updating the NMS Manpower Model, and for related criminal justice manpower planning purposes. The most significant of these, for purposes of updating of the NMS projections, is the absence of periodic data on employment and personnel turnover in certain key occupations in sufficient detail for use in assessing future training and educational levels. In addition, there are virtually no ongoing data collection programs which would provide periodic information on a comprehensive national basis, on the educational attainment and training status of employees of criminal justice agencies or on related criminal justice education and training programs. Any program or strategy for new data collection on criminal justice manpower should consider both of these needs concurrently.

Two major options are available for this purpose. The first consists of modification of existing statistical surveys or reports to include additional information required to meet specific data requirements for criminal justice manpower planning. This may also require special arrangements for provision of statistical tapes or tabulations, or for preparation of separate analytical reports, based on these data. The second alternative is the initiation of new surveys or data collection programs for this purpose.

In principle, the first alternative is preferable if there is assurance that the required data can be provided in a form compatible with user needs and within a reasonable time interval. The initiation of new survey programs is costly. It requires the services of a specialized professional survey staff, either in the sponsoring agency or in an appropriate contractor organization. In addition, it imposes a substantial reporting burden upon agencies or individuals. Thus, both cost-effectiveness considerations and the need to minimize reporting "paper work" requirements would suggest maximum reliance upon ongoing statistical reporting programs. Several major possibilities for modification of such approaches to meeting criminal justice manpower data needs are discussed below.

1. Census of Population

The major limitations of this source, for model updating and related purposes, have been the long 10-year interval between censuses, and inadequacies in the existing Census classifications of occupations and public agencies. Both of these limitations may be in the process of correction. The

Congress has recently authorized planning by the Census Bureau for conduct of quinquennial, rather than decennial censuses.[1] Thus, in addition to the next scheduled census in 1980, it is expected that subsequent population censuses will be conducted at five-year rather than ten-year intervals. Secondly, revised statistical classification systems have been developed which--if fully adopted by the Census in 1980--will greatly increase the utility of these data for criminal justice manpower analysis. Thus, the revised Standard Industrial Classification Manual issued by the Office of Management and Budget in 1972, establishes a separate major two-digit classification for governmental agencies engaged in "Justice, Public Order and Safety" (Group 92).[2] Separate codes are established for courts, police protection, legal counsel and prosecution, correctional institutions, fire protection and other "public order and safety" agencies. In addition, the OMB is in the process of developing, for the first time, a comparable Standard Occupational Classification Manual for use by all governmental statistical programs in collection of occupational data. A draft of this manual, issued in May 1976, provides for separate identification of the following key criminal justice occupations.[3]

Code	Occupation
1131	Judicial, public safety and corrections administrators
512	Law enforcement officers
5121	Supervisors, police and detectives
5122	Police and detectives, public service
5124	Sheriffs, bailiffs and other law enforcement officers
5133	Correctional institution officers

The assignment of separate codes for criminal justice agencies, and for such occupations as criminal justice administrators, police supervisors, and correctional officers, would greatly enhance the utility of the Census data for criminal justice manpower analysis. It would permit the development of agency-occupational matrices for the major criminal justice sectors, both nationally and by state or area. Moreover, it could make available a wealth of data on the characteristics of employees in these occupations, such as age, sex, race, educational attainment, vocational training, earnings, hours of work, and prior occupation. Detailed analysis of these data would probably require acquisition and processing of public-use tapes from these samples, or arrangements with the Census Bureau for special detailed tabulations of the required data.

It must be emphasized, however, that there is no assurance that the Census Bureau will in fact find it feasible to classify individuals based on the detailed 4-digit agency or occupational codes described above, either because of technical or cost considerations. Because of the potential importance of these data for criminal justice manpower planning, the NMS staff recommend that the LEAA take appropriate initiatives with Census and OMB to stress the importance of these data, and to assure that the maximum feasible occupational/agency detail is included in plans for the forthcoming Census.

2. Current Population Survey

The monthly survey of the labor force, conducted as part of the Census Bureau's sample population survey program, provides a potential source for additional national-level data on key criminal justice occupations. Statistics on annual average employment in specific occupations are tabulated from this source, based on data collected from each of the monthly surveys. The CPS sample has been expanded from 50,000 to 55,000 households, and further expansion is planned. These should improve the statistical reliability of the resulting estimates and permit compilation of data for more detailed occupations, in accordance with the draft standard occupational classifications described above. For relatively large occupations, such as policemen and detectives, this source could also be used to provide special tabulations on personal characteristics, educational attainment, and earnings.

3. EEOC Reports

Several revisions in reporting and data processing procedures, under the EEOC annual survey of state and local governments (EEO-4), would improve the usefulness of these data for LEAA purposes. The first would be a more detailed agency classification scheme which would separately identify courts, prosecution and legal services, and indigent defense agencies, as well as providing a more detailed classification of correctional agencies, e.g., adult, juvenile, probation and parole. Secondly, a requirement for inclusion in the survey reports for each fiscal year of agency employment, by occupation, at the beginning and end of the fiscal year, would greatly facilitate computation of personnel turnover rates, by occupation group, for each agency category. Such data could, of course, be disaggregated as needed, to provide current occupational and personnel turnover statistics by state and SMSA, as well as at the national level.

4. BLS Occupational Employment Statistics Program

In 1973, the Bureau of Labor Statistics initiated a program for periodic collection of employment statistics for each industry by detailed occupation, covering both the private and public sectors. The plans provided for collection of these data under cooperative arrangements with 29 state agencies, and for coverage of each industry or public agency category on a biennial cycle. One of the important uses of the data is to permit updating of BLS occupational employment projections and related analyses with more current data than otherwise available from the decennial censuses. The procedures initially established for this program did not provide for separate functional classification of state and local agencies, which identify those with primary law enforcement and criminal justice functions. Adoption of the detailed 1972 Standard Industrial Classification for these agencies would be highly desirable since it would provide information on detailed occupational trends by agency, both at the national level and for each of the states cooperating in this program.

* * * * * * * * * *

The above list clearly does not exhaust the possibilities of utilization of ongoing statistical programs in filling the statistical data gaps described above. To illustrate, consideration could be given to modification of the FBI Uniform Crime Reporting procedures to provide for inclusion of annual personnel turnover and training data on sworn police officers. Plans for periodic censuses of correctional or other criminal justice agencies should also be carefully reviewed to assure that the personnel data provided are in a form most adaptable to trend analysis and for use in manpower projections, including possible provision of personnel turnover and training data.

It is believed that sustained efforts in this direction, with appropriate cooperation from other governmental statistical agencies and support from OMB, could fill most of the statistical data input requirements for model updating. There will, however, probably be some residual requirement for limited new data collection programs. Supplementary manpower data may be needed, particularly with respect to agencies in the courts sector and for probation and parole agencies. These, generally, are the least adequately covered in any of the ongoing or special statistical programs. Moreover wide variations in organization structure of courts and probation/parole agencies have made it difficult to separately identify and classify these activities, as part of a general-purpose classification scheme. In addition to personnel data for these agencies, there is, of course, a critical need for comprehensive national statistics on case loads, case backlogs, and related workload measures in courts and court-related agencies.

In addition, special surveys would still be needed to develop data on the extent and types of specialized training received by employees in the various key criminal justice occupations. None of the ongoing statistical programs described above can realistically be expected to provide such data in the detail required for either national or state-level manpower planning.

To meet these and related needs, two models for new data collection programs are available. The first, typified by the U.S. Bureau of the Census, provides for centralized data collection by a national-level agency, based on direct mailed questionnaires, field surveys, or the use of household interviews. This method has the advantages of unified control and standardization of data collection and data processing procedures. By the same token, one obvious disadvantage is that it does not permit modification or supplementation of the survey instruments to meet specific data needs at the state or local levels.

The second procedure is illustrated by the system followed by the U.S. Bureau of Labor Statistics in its collection of statistics on employment, hours, earnings, and related data for employees in nonagricultural establishments. This procedure is based on cooperative arrangements with appropriate agencies, such as state labor departments, in each of the 50 states, under which these agencies serve as the BLS data collection agencies, and--at the same time--use this reporting system for compilation of their own state-level employment statistics. The latter procedure eliminates duplicate reporting requirements and, at the same time, provides a machinery at the state level for collection of more detailed, or supplementary, types of data as needed.

The latter procedure appears generally preferable, particularly with respect to specialized surveys of employee training needs or programs. Operational and funding responsibility for such training programs normally rests at the state or local levels, and appropriate training standards are also normally set at the state level. Thus, a cooperative survey program, which would meet the more general manpower data requirements at the national level, as well as the more specific operational needs of individual state agencies, is recommended as the preferred alternative for such surveys.

D. REVISIONS OF EXOGENOUS VARIABLES

The exogenous variables directly incorporated into the NMS model include: (1) total state and local government expenditures, (2) the unemployment rate, (3) per capita personal income, (4) total population, (5) the percentage of youth aged 15-24 years in the population, (6) the percentage of total population residing in SMSA's, (7) federal grants to state and local criminal justice agencies, and (8) average earnings of criminal justice employees.

Projections of the first five of these variables were directly derived from the National Economic Projections issued by the National Planning

Association in its most recent National Economic Projection Series (NEPS). This series includes projections of the national economy and related population and labor force data for a period of 10 years ahead. It has been published, at periodic intervals, as a subscriber service whose users include economists and planners in major corporations, trade associations, unions, and governmental agencies. Several alternative economic projections series are also available on a subscriber basis, including those of Chase Econometrics, Inc., Data Resources, Inc., and those of the Wharton School of the University of Pennsylvania.

A sixth variable, Federal criminal justice grants, can also be projected based on the NEPS reports. These grants, in the NMS model, were assumed to have a future growth rate (in constant dollars) similar to that projected by NEPS for all federal grants. This assumption will, of course, need periodic reassessment based on future budgetary developments.

The two remaining exogenous variables--the percentage of the population residing in SMSA's and the projected trend in criminal justice earnings (in constant dollars)--will require direct estimation. In both instances, annual time series data are available from Census reports and from the LEAA/Census expenditures and employment reports, respectively. In addition, as noted in our summary of available data sources (Table III-1), a number of series on wage or salary trends for employees in specific occupations, such as policemen, are available for use in a more detailed analysis of factors contributing to wage trends.

Thus, although projection of the exogenous variables will require exercise of professional judgment, no additional data collection effort will be needed for this purpose.

CHAPTER III

FOOTNOTES

1. P.L. 94-521, An Act to Amend Title 13 of the U.S. Code to Provide for a Mid-decade Census of Population and for Other Purposes, October 17, 1976.
2. Executive Office of the President, Office of Management and Budget, Standard Industrial Classification Manual, 1972, p. 337.
3. Executive Office of the President, Office of Management and Budget, Draft Standard Occupational Classification Manual, 1976.

CHAPTER IV. MEETING DATA REQUIREMENTS FOR CRIMINAL JUSTICE MANPOWER PLANNING AT THE STATE LEVEL

A. INTRODUCTION

In recognition of the need to meet manpower data needs at both the state and national level, the original design for the National Manpower Survey had contemplated a cooperative federal-state effort in the development and conduct of agency and employee-level surveys. This did not prove feasible, primarily because of the need to integrate the NMS data collection efforts with the concurrent LEAA-funded Census survey of characteristics of employees in criminal justice agencies. As discussed elsewhere in this report, this required modification of the NMS data collection plan to emphasize executive-level surveys.

However, since one of the tasks of the NMS project was to develop data collection procedures which could be used in updating the survey data and manpower projections, approval was obtained to undertake a cooperative manpower survey program with a prototype state, which would result in the design of survey instruments and procedures appropriate for use by state planning agencies generally. The North Carolina criminal justice planning agency--the Law and Order Section of the Department of Natural and Economic Resources--agreed to cooperate with the NMS in this undertaking. A comprehensive survey of the state's law enforcement agencies was completed as part of this project, and survey plans were developed for a number of other agency categories. Fund limitations, as well as problems of securing cooperation from some of the State agencies concerned, precluded the execution of a comprehensive set of surveys for all sectors of the State's criminal justice system. The experience from this survey program is summarized in Appendix B, which also includes a general guide for planning of manpower surveys by state planning agencies, and descriptions of the survey intruments and procedures developed.

This chapter discusses a number of key issues involved in planning of state-level manpower surveys, based on experience with the North Carolina survey, and then provides guidance on use of state-level data for criminal justice manpower projections.

B. ISSUES IN MANPOWER SURVEY DESIGN

1. Need for State-Level Manpower Surveys

A decision by a state agency to conduct a manpower survey of some, or all, of the components of the criminal justice system, requires an initial assessment of its manpower data needs and a determination that these needs cannot adequately be met from existing data sources or from other ongoing surveys. Some of the specialized data needs of state agencies were identified in Chapter I, based on the North Carolina experience. These needs will vary, depending upon the role of the state agency in the overall planning of criminal justice manpower, training, and educational programs. For example, state agencies which play an active role in funding of state or regional training academies for law enforcement and correctional officers may require detailed data on the current training status of these personnel, as well as an ability to project trends in future training needs of agencies utilizing these academies. On the other hand, in the absence of a clear role in overall criminal justice manpower planning, the justification for special statewide surveys may be more questionable.

Based on the North Carolina experience, particular attention should be devoted to assessing the adequacy of existing statistical reporting and personnel accounting systems for particular categories of agencies, such as state correctional or courts agencies, before a decision is made to undertake a special survey. Thus, efforts to extend the scope of the North Carolina surveys to the state correctional system proved unsuccessful because of the contention by state correctional officials that their existing centralized statistical data sources were adequate for their operational needs.

Similarly, coordination with appropriate LEAA statistical or manpower staff at either the regional or national level is desirable, to avoid possible duplication of survey efforts at the federal and state levels. As noted in the previous chapter, a cooperative federal-state system for manpower data collection is desirable as a longer-range objective. However, if such a system is not put into effect or does not adequately meet state data needs, state agencies will find it necessary to initiate their own data collection programs.

2. Choice of Survey Agency

A state agency which has established the need for a manpower survey will generally have three options concerning the appropriate agency to design and execute the survey. It may elect to conduct the survey itself, it may obtain the assistance of another state agency in conducting the survey, or it may choose to have the survey performed by a nongovernmental survey organization on a contract basis.

If the agency anticipates the need for a periodic, e.g., annual, survey program, the preferred choice would be to have the survey executed by its own staff, provided that it has at least one professional staff member with the necessary skills in survey design and execution, and access to the needed clerical, programming, and computer resources for processing the survey responses. These are absolutely essential to assure that the resulting data will be reliable and that they can be produced on a timely schedule. The illustrative formats and procedures described in Appendix B are designed to be helpful in survey design, but require the availability of professionally trained survey or statistical staff for their execution.

If such resources are not available, it is recommended that the state agency arrange for execution of the survey by an appropriate state statistical or survey organization or by a private organization, on a contract basis. Even under these conditions, it will still be the responsibility of the state planning agency to clearly specify its data requirements, to review the proposed instrument and survey procedures, to take the initiative in assuring adequate cooperation from respondents, to specify the tables required, and to have the capability of effective utilization and/or dissemination of the resulting data.

3. Data Specifications

A decision to undertake a special survey presumes an initial determination of the types of data required. The formulation of these data specifications in a clear, definitive manner for questionnaire design often requires considerable judgment and knowledge of the subject area, and of the range of possible conditions which may exist among agencies throughout the state. To the maximum extent feasible, these items should be formulated to provide a capability of systematic comparison with information at the national level and with any similar data for prior periods within the state. Moreover, since the marginal cost of adding items to the survey instrument is relatively small, as compared to separate surveys, the needs of other user agencies within the state, or nationally, should be considered. For this reason, joint planning or coordination of any planned survey with potential user agencies is recommended prior to development of a final list of data specifications.

4. Choice of Type of Survey

Generally, three types of surveys may be needed, depending upon the nature of the information required. The first is an "executive opinion" survey, which is designed primarily to obtain the judgments of agency executives on such matters as personnel needs, training needs, agency plans, and related policy issues. These are illustrated by the NMS executive survey instruments, as well as by the executive opinion questionnaire for North Carolina law enforcement executives in Appendix B. The second is an agency-level survey, which requests factual data--usually in statistical form--on agency personnel, training activities, budgets, functions, etc. Such information can normally be supplied by responsible staff in an agency's budget, personnel, or administrative office, and does not necessarily require the personal attention of the agency's executive. The third is an employee-level survey which requests either objective information about the individual employees--e.g., personal characteristics, training and education, work experience, and current job--or attitudinal information, such as job attitudes, career plans, or the usefulness of training received, or a combination of both. The Census Employee Characteristics Survey described in Volume VIII illustrates the latter type of survey.

A comprehensive manpower survey program may include all three categories of surveys. The first two types--the executive opinion questionnaire and the agency data questionnaire--were incorporated into a single instrument in both the NMS national surveys and those conducted in North Carolina. The latter surveys were also used to obtain summary data on the distribution of agency personnel by certain personal characteristics, such as education and length of service. This proved practicable in North Carolina, in view of the excellent cooperation from law enforcement agencies in the State in responding to this survey.

It may not be equally practicable in states with a considerable number of large and medium-sized agencies, which may not have the necessary personnel data to provide such information. Moreover, certain information, such as detailed and current information on each employee's education and training, is often not available in central files or statistical records--or may impose an unreasonable workload requirement upon responding agencies. For these reasons, an employee-level questionnaire may be required. Such a survey may either be conducted as a census for all employees in a given category within a state, or it may be conducted through systematic sampling. It is likely to be more costly than agency-level surveys. An annual sample survey of employees to provide current data on their training and educational status, and for related purposes, was recommended to the North Carolina state planning agency, but was not implemented as part of the "prototype" survey plan.

C. APPLICATION OF THE NMS MODEL TO STATE CRIMINAL JUSTICE MANPOWER PROJECTIONS

As noted in Appendix A, the NMS Model can be readily adapted for use in projection of criminal justice manpower trends for individual states. This will require, as data inputs, the substitution of state-level data for the national data on both the key criminal justice system variables of the model and the exogenous economic and demographic variables. The availability of data, by state, for both sets of variables is reviewed below.

1. Criminal Justice System Variables

The key endogenous variables which are required to generate projections of aggregate employment by sector, at the state level, are all available in annual federal statistical publications. These include: (1) the LEAA/Census Expenditures and Employment Data which provide statistics by state on employment, expenditures, and payrolls for criminal justice employees, by sector; (2) the FBI Uniform Crime Reports which provide data on Part I crimes and arrests; and (3) the National Prisoner Statistics which include data on the number of state prisoners.

The national data sources available for current estimates of employment and personnel turnover, by occupation, have been reviewed in Chapter III of this volume. Certain of these sources, such as the planned quinquennial Censuses of Population and the annual EEOC reports, could produce usable occupational employment data at the state and local levels, as well as the national level, in the future. This is also true in the case of the special censuses of correctional agencies which have been conducted in recent years and which may be repeated at periodic intervals in the future. To the extent that the above data sources do not meet state needs, in terms of timeliness, coverage, or level of detail, special surveys or other data collection procedures may be required.

2. Exogenous Variables

The generation of criminal justice manpower projections at the state level will also require the substitution of state values for the national-level data on the exogenous economic and demographic variables required in the NMS model. Of the eight variables specified in the model, four are routinely published, by state, in NPA's Regional Economic Projections Series (REPS). It includes projections of the following demographic and economic variables by state and for the major SMSA's in each state: total population, population by age group, percent of state population in SMSA's, and per capita personal income.

Supplementary state-level projections would, however, be required for the following variables: total state and local government expenditures, federal grants, earnings of criminal justice employees, and the unemployment rate. One procedure available for projection of the latter variables at the state level is to analyze the past relationship between the state-level data and the corresponding national-level series. For example, if the unemployment rate, or the trend in state and local government expenditures in a given state, has closely paralleled the trend at the national level, the projected rate of change at the national level could appropriately be used. However, state economic and fiscal trends are likely to deviate from the national trend. In such situations, the trend in the ratio of the state variable to the corresponding national level variable can be computed and, in turn, extrapolated.

Further adjustments should be made, of course, based on an assessment of any recent fiscal or economic developments in each state which may cause a specific variable, such as state and local expenditures, to deviate from past trends or relationships.

CHAPTER V. SUMMARY AND RECOMMENDATIONS

A. THE STATUS OF CRIMINAL JUSTICE MANPOWER PLANNING

One of the major tasks assigned to the National Manpower Survey was the provision of methodologies for maintaining and updating the data on current and projected criminal justice personnel and training needs developed by this study. These were to include

> instrumentalities and procedures, including data collection and updating and processing methods, forecasting models or equations, and related methods and procedures, so as to make planning and corrective activities possible on a continuing basis at all governmental levels without the need for repeated projects of this kind and scope.[1]

A literal interpretation of this task would have required only the submission of the methodological procedures and models described in the Appendices to this report, as supplemented by the less-technical presentation of these materials included in Chapters II-IV. This volume has attempted, however, to address, as well, the more fundamental issue of the relevance of the data to be collected or analyzed to the process of decision making on issues affecting criminal justice manpower, training and education. The NMS staff have emphasized that systematic manpower planning entails significant costs in data collection and analysis and that a programmatic commitment to such planning should be undertaken only if there is an equal commitment to utilizing its results in program and policy decisions.

The legislation directing the initiation of the National Manpower Survey provided recognition at the federal level that a manpower planning perspective, based on a systematic assessment of both existing and future personnel needs, was necessary for sound decisions on allocation of federal funds for upgrading of criminal justice personnel. However--with limited exceptions--state planning agencies have neither the effective authority nor the capability to engage in comprehensive planning with respect to the personnel needs of the criminal justice agencies in their states. The LEAA has, in fact, not established a requirement for comprehensive manpower planning by state agencies, although it has requested that a considerable amount of manpower data be included in the annual plan submissions. The NMS inspection of a sample of these plans has indicated only partial compliance by state agencies with this aspect of the LEAA requirements. Manpower data and related workload data included in many of these Comprehensive State Plans were found to be incomplete and to lack a programmatic context. With limited exceptions no systematic attempt has been made to project needs and resources in relation to goals on a system-wide or even sector-wide basis.

These deficiencies in state manpower planning can be attributed to three factors: (1) the limited role of the SPA's in decision-making on state criminal justice agency budgets, programs, and policies; (2) inadequate SPA staff resources; and (3) inadequate manpower data. In view of the critical role of the state and local governments in the criminal justice system, efforts to rationalize the planning of personnel and training programs of criminal justice agencies must address all of these planning deficiencies at the state level, in addition to strengthening manpower planning capabilities at the national level. Thus, improved collection and analysis of state-level manpower data alone, in the absence of adequate authority and staff for application of these data in program decisions, would not be productive.

However, such data are clearly a necessary condition for effective planning, if the authority and staff resources are available.

B. THE NMS MODEL AS A PLANNING TOOL

The NMS Criminal Justice Manpower Model as described in Chapter II and Appendix A was designed to project national trends in employment in state and local criminal justice agencies by sector and occupation, as well as related recruitment needs in key occupations. The model concurrently produced projections of three criminal justice workload indicators: Part I offenses, Part I arrests, and prisoners in state institutions, which are essential intermediate outputs of the projection system. Its unique characteristics are the incorporation of a system-wide approach, the inclusion of key economic and demographic variables identified as significantly affecting the future demand for criminal justice manpower, and the incorporation of explicit projections for each of these variables.

The projection results indicate that employment growth rates and recruitment needs of criminal justice agencies in the period 1975-85 are likely to be considerably lower, generally, than in the recent past, i.e., the 1971-74 period, but that there will be considerable variation among the major sectors and occupations. The implications of these trends for training needs have been illustrated for two line criminal justice occupations: police officers and correctional officers. A major finding based on this analysis is that the reduced volume of new recruitment projected for these occupations should make possible an increased emphasis on qualitative improvements in both entry-level and in-service training with limited net additional costs.

Although the NMS model provides a potentially useful tool for manpower planning, its limitations should be clearly appreciated.

- Based on the NMS analysis of recent experience, overall economic and fiscal trends are likely to have a greater impact upon the future demand for criminal justice manpower than more specific trends within the criminal justice system itself. These trends will be influenced by a large number of variables, including governmental economic and fiscal policies and developments abroad. Despite the increased sophistication of economic projections systems, all of these projections are subject to widening margins of uncertainty the longer the projection period. Hence, the shorter-term projections for the period to 1980 are probably somewhat more reliable than those for the period 1980-85.

- The trends and relationships which served as the basis for these projections were mainly derived from data for the years 1971-74. This was due to the fact that systematic data collection on criminal justice expenditures and employment was only initiated in the late 1960's; hence, comparable data for earlier periods were generally not available.

- Data limitations also imposed other constraints on the design of the projection system. A systematic measurement of offender flows and related workloads through the various stages of the criminal justice process would have been desirable as an element of the model but was clearly impractical.

- Finally, experience during the past decade has illustrated that many important criminal justice trends have resulted from such factors as major court decisions on defender rights and shifts in public attitudes concerning punishment of offenders, and from other factors outside of the direct control of criminal justice agencies themselves. These developments have been reflected in the NMS projections only to the extent that they were operative during the base period, i.e., 1971-74. We can anticipate that in the 10 years ahead, there will be new policy or organizational developments which may have important effects upon the criminal justice system, and which were not anticipated in NMS projections.

The above limitations are inherent in any system of manpower or economic projections of this type. The results can best be interpreted as indicators of what may happen if the assumptions materialize, rather than as categorical forecasts of what will happen. For this reason, any planning system requires provision for updating of the projections at periodic intervals to incorporate new trend data, revised assumptions, and improved analytical methods.

C. STRATEGIES FOR MANPOWER DATA COLLECTION

Periodic collection of new data on employment and personnel turnover by occupation and on characteristics of criminal justice employees will be essential both for future revisions of the NMS manpower projections and for related planning purposes. The major deficiencies in ongoing statistical programs, as described in Chapter III, include: (1) inadequate recurring data on employment and personnel turnover for key criminal justice occupations; (2) the general absence of any system of recurring reports on the training and educational status of personnel in these occupations, and on related training or educational programs; and (3) the general inadequacy of criminal justice workload data, particularly for the courts sector and probation and parole agencies.

The preferred alternative for new data collection is to rely--to the maximum extent practicable--upon existing established statistical programs for such data, with appropriate modifications to meet the needs of LEAA and state planning agencies. Major possibilities for expanding the criminal justice manpower data base include: (1) incorporation of more specific criminal justice agency and occupational classifications into the Census of Population, which will be conducted on a five-year, rather than ten-year schedule under recent legislation; (2) the use of the Current Population Survey for annual updating of occupational employment trends and related data for key occupations; (3) modification of the annual EEOC reports on state and local government employment as a primary source of personnel turnover data in certain key occupations; and (4) modification of the BLS occupational employment statistics reports to provide for separate identification of criminal justice agencies in cooperating states.

In addition, there will be a requirement for initiation of new data collection procedures, particularly for development of recurring data on training and education of criminal justice employees. A federal-state cooperative system similar to that used by the U.S. Bureau of Labor Statistics is recommended for this purpose in order to assure that both national and state-level data needs are met.

D. MEETING MANPOWER DATA NEEDS AT THE STATE LEVEL

Although an integrated manpower data system--linked to existing statistical programs and based on a federal-state cooperative system for new data collection--is the preferred long-range objective, state agencies will continue to require some special or periodic state-level manpower surveys to meet their current planning needs. A guide to survey procedures, based on the North Carolina prototype survey, is included in Appendix C. Any decision to initiate such surveys must allow for a significant commitment of professional staff time for such purposes as specification of data requirements or coordination with other user agencies, and for general supervision of the survey plan even if a contractor organization is employed for its execution.

In addition to the need of many state agencies to expand their current manpower data base, it is clearly desirable that those agencies which have the authority and staff resources for systematic manpower planning develop their own manpower projections capabilities. The NMS national-level model can be readily adapted for use at the state level in its present form provided that plans are made for development of state-level data on certain criminal justice variables, such as employment and personnel turnover in key occupations. However, these projection procedures must be supplemented by professional judgment on unique policies or trends in given states, which may require modification of the model specifications or judicious interpretation of the resulting projections. The availability of staff with the needed qualifications should therefore be a necessary condition for the initiating by a state agency of a manpower projection program.

E. RECOMMENDATIONS

The following recommendations are based on the premise that a manpower planning process providing for systematic assessment of current and anticipated personnel and training needs is a valuable management tool in arriving at decisions concerning funding of criminal justice training and academic assistance programs. A commitment to this process requires much more than formulation of general guidelines, or even than a set of technical procedures for data collection or projections. It requires a management decision that this process will, in fact, be utilized in decisions on priorities and on fund allocations. And it also requires a commitment of sufficient resources for professional staff and for the essential data collection and processing activities needed to implement the program.

Specific recommendations for LEAA and for state planning agencies are as follows:

(1) That LEAA should establish a Manpower Analysis and Planning Office or unit which would be responsible for maintaining a continuing assessment of current and projected personnel needs and resources for the criminal justice system, and for related recommendations concerning measures needed to upgrade personnel capabilities. These assessments should be systematically disseminated to appropriate agencies of LEAA, to state planning agencies, and to other interested agencies and organizations. This office should also be responsible for planning of a comprehensive manpower data information system in coordination with the National Criminal Justice Information and Statistics Service (NCJISS), the National Institute of Law Enforcement and Criminal Justice (NILECJ), the Office of Training and Education, and other approriate LEAA offices. In performance of this function, it should review and coordinate any proposed manpower and personnel surveys to be funded by LEAA agencies, and serve as a clearinghouse on current or planned criminal justice manpower surveys, both at the federal and state levels, to avoid duplication of surveys or related data collection efforts in this field.

(2) In planning of the criminal justice manpower information system, priority should be given to maximum use of ongoing federal statistics programs, including appropriate modifications of such programs designed to increase their applicability to criminal justice manpower data needs. To the extent that new national surveys or data collection programs are required, such programs shall be conducted, where practicable, under a federal-state cooperative system designed to concurrently meet user needs at both the federal and state levels.

(3) State planning agencies should be encouraged to establish parallel Manpower Analysis and Planning functions as ongoing activities in their agencies, with provision for at least one professionally qualified staff person to have primary responsibility for this function in each agency. An important function of this unit would be to advance manpower planning capabilities at all levels of the state's criminal justice system with particular emphasis on the needs of statewide agencies and the larger areas and regions within the state. A plan for training of these SPA manpower analysts should be developed by LEAA to include dissemination of manpower planning guides, model survey instruments and procedures, and special training sessions or courses.

(4) LEAA guidelines for annual plan submissions by SPA's should be revised to require inclusion at stated intervals--but not necessarily annually --of comprehensive assessments of state criminal justice manpower needs and resources for all sectors of the system, including an identification of any significant quantitative or qualitative deficiencies in staffing, and of plans to correct such deficiencies. This should replace the current requirements for routine manpower data submissions in Section I of the Annual Plan submission. The need for current uniform and comprehensive criminal justice manpower data by state should be separately addressed through the programs of the proposed LEAA manpower analysis and planning office.

(5) State agencies should be invited to cooperate with the proposed LEAA Office of Manpower Analysis and Planning in the development of a national clearinghouse of planned and ongoing manpower surveys as a means of avoiding possible duplication of effort and of providing a systematic pooling of data and research in this field.

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CHAPTER V

FOOTNOTES

1. Contract between the U.S. Department of Justice, Law Enforcement Assistance Administration and the Research Center, National Planning Association, No. J-LEAA-035-74, dated June 28, 1974, p. 7.

APPENDIX A
THE DEMAND FOR CRIMINAL JUSTICE SERVICES AND PERSONNEL
The NMS Manpower Projections Model

The NMS Manpower Projections Model represents an application of economic theory and of econometric methodology to the analysis of the demand for criminal justice services. A nontechnical description of the model and of the resulting manpower projections is presented in Chapter II of this report. This Appendix includes a more technical description of the theoretical assumptions of the model, of the estimation procedures and the results. Section A contains a brief summary of recent relevant econometic research. Section B presents the formulation of the model. The data sources used in estimation of the model are described in Section C. The estimates of the model and some of their implications are discussed in Sections D and E.

A. SUMMARY OF RECENT LITERATURE

A basic premise of economic theory is that economic units--whether individuals or establishments--make rational decisions in their expenditure or investment decisions designed to maximize their own welfare function. Although some have questioned this premise, as applied to the budgetary decisions of state and local governments, recent empirical investigations using an explicit rationality assumption have met with a fair degree of success in isolating the determinants of state and local expenditures. Thus, Henderson[1] developed a model of a community explicitly maximizing social welfare, subject to its budget constraint. The community's social welfare was assumed to be a function of both public and private expenditure levels per capita. After selecting a particular "logex" form for community welfare activities, Henderson solved for the first order conditions in order to obtain his estimating equations for local expenditures, private expenditures, local taxes and local debt. The results of his empirical work were consistent with the logex form of community welfare services. Further, his results indicated that there were major differences between metropolitan and nonmetropolitan expenditure and revenue reactions to changes in per capita personal income.

Gramlich[2] took an approach similar to Henderson's, with the exception of replacing the logex utility function with a quadratic one in state and local public expenditures, taxes, and income. The revenue equation was estimated separately, while the expenditure equations were estimated simultaneously --subject to the budget constraint imposed by state and local revenues. He concluded that the budget constraint was particularly important in its effect on state and local expenditures. Debt was statistically significant, and the estimates implied a very stron political or legal restriction against current borrowing that was almost as great as the urge for more expenditures, and apparently much stronger than the feeling against higher taxes.

Gramlich and Galper[3] extended Gramlich's original work in an investigation of the impact of federal grants, by type, on state and local fiscal behavior. As in Gramlich's previous work, the authors assumed a quadratic utility function in deriving their set of revenue and expenditure equations. The useful mathematical property of a quadratic utility function is that it produces, with a linear budget constraint, linear expenditure and revenue equations. Although their statistical results, like Gramlich's previous results, were sufficiently strong to indicate a high degree of simultaneity between the determination of expenditures and taxes and to preclude rejection of a quadratic utility function, there were no particular theoretical considerations justifying the use of a quadratic utility function. Thus, it appeared that a nonlinear set of expenditure and revenue equations might be more appropriate.

An article by Becker[4] launched a sequence of empirical and theoretical investigations of the behavior of criminals and society's response to them, based on the assumption that criminals and society are rational, i.e., that they will attempt to maximize their utility subject to the budget constraint. Becker's main contribution was a demonstration that the economic framework was applicable to determining optimal policies to combat illegal behavior and that the determination of these policies was part of an optimal allocation of resources. Although one can take issue with Becker's conclusion that minimizing the loss in income from illegal activity is more efficient than basing policies to combat illegal behavior on vengeance, deterrence, safety, rehabilitation of compensation, Becker did develop a suitable framework for jointly analyzing the behavior of those engaged in the illegal activity (criminals) and those who suffer from this illegal activity (the rest of society). Also, recent empirical work has shown the framework developed by Becker to be most useful in generating statistically significant and intuitively plausible results in isolating the determinants of crime and society's response to crime.

Ehrlich[6] used a model similar to Becker's to isolate the effect of deterrence variables, such as police, and alternative market opportunities on the rate at which various index crimes are committed. Although his statistical results showed a large number of insignificant parameters, they did indicate that the rate of specific felonies was positively correlated with expected gains from the crime and negatively related to expected costs of the crime. Also, estimates of the impact of the probability and severity of punishment on the crime rate were not inconsistent with the hypothesis that law enforcement activity deters criminal activity, independent of any preventative effect of imprisonment. The effect of law enforcement activity upon crimes against persons was similar to its effect on crimes against property. Given this deterrent effect, Ehrlich was able to estimate the value of public expenditures for police and court activity. For 1965, his estimates indicated that the value of an additional dollar spent on police or court activity was less than $1.

In a similar vein, Swimmer[6] came to the conclusion that police expenditure was too low, especially in large cities. His result differed from Ehrlich's because Swimmer included a generous estimate for the value of police activity unrelated to crime. Perhaps the most interesting aspect of Swimmer's work was the difference in the estimated crime rate and police expenditure equations obtained by the use of ordinary least squares and two-stage least squares. With ordinary least squares, total police expenditure per capita had no effect on the seven categories of crime. However, with a simultaneous model of police expenditures and the seven crime types, the resulting estimates indicated that police expenditures per capita had a negative effect on six of the seven crime types.

In a recent article, Beaton[7] took a different approach than Swimmer in that he used a single-equation, ordinary-least-squares approach to estimate the determinants of expenditures per capita for cities in New Jersey. Beaton's primary finding was that the relationship between per capita police expenditures and the crime rate varied significantly between cities of various population sizes and whether the city was growing or declining in population.

This brief summary of selected literature on state and local revenues, crime rates, and law enforcement expenditures implies that (1) state and local expenditure functions may be treated as consumption functions, (2) the economic framework of utility maximization seems to be appropriate for isolating some of the determinants of crime, (3) crime and law enforcement expenditures or employment equations should be considered simultaneously, and (4) the parameters of crime and law enforcement equations may vary significantly between areas of increasing and decreasing population. If the fourth point can be attributed to a disequilibrium relationship in the employment of inputs in the production of criminal justice services, the model presented in the next section is consistent with these four conclusions.

B. THE MODEL

The objectives of the empirical work were to isolate the determinants of (1) the demand for criminal justice services and (2) the associated demand for the inputs that produce criminal justice services. The next two sections address these questions in turn.

1. The Demand for Criminal Justice Services

If it were possible to measure criminal justice services by a vector (Q), then a solution to a constrained welfare maximization problem would give a demand function for each of the components for criminal justice services

(1) $Q = f_1(p, EXP, X)$.

Where p is a vector representing the price per unit of each of the criminal justice services, EXP is total state and local government expenditures (the budget constraint), and X is a scalar representing all other goods with a defined price per unit equal to one.

However, there are no complete observations of the vector Q. Multiplying both sides of the equation (1) by p gives

$$(2)\quad CJ = p.Q = p.f_1(p,EXP,X) = f_2(p,EXP,X)$$

where CJ is total criminal justice expenditures. Equation (2) can not be estimated since there are no complete observations on the price per unit of each type of criminal justice service.

A suitable replacement for p is obtained from the basis for deriving equation (1) which is the constrained social welfare maximization problem:

$$(3)\quad \max_{Q.X} \; u(Q,X)$$

$$\text{subject to } p.Q + X \leq EXP$$

In this problem u(Q,X) is the social welfare function and the price of X is defined as equal to one. The solution to (3) requires that each element of p be equal to the marginal utility of consuming an additional unit of the element. It seems reasonable to hypothesize that the marginal utility of each additional unit of criminal justice service, of any type, could be written as a function of the crime rate (TCR), the consumption level of all other goods (X), and a vector of exogenous variables (Y):

$$(4)\quad CJ = f_2(p(TCR,Y,X),EXP,X) = f_3(TCR,Y,EXP,X)$$

In order to estimate (4) it is only necessary to specify functional form for $f_3(\cdot)$ and determine what variables (Y) and (X) should be included. For the purposes of this exercise, the only additional exogenous variable included was federal law enforcement grants to state and local governments (GRANTS). Also, since total criminal justice expenditures are a relatively small protion of state and local expenditures--less than 10 percent--no other endogenous variables (X) were included. For various reasons that will become clear in a later portion of this paper, a log linear form was selected and the final estimating equation was

$$(5) \quad CJ = \alpha_1 + \alpha_2 \cdot TCR + \alpha_3 \cdot GRANTS + \alpha_4 \cdot EXP ,$$

where α_1's are the parameters to be estimated and all variables are measured in their natural logarithms.[8]

The only endogenous variable in (5) is the total crime rate (TCR). If the choice between engaging in criminal or legal activity is based upon rationality, the level of criminal activity in which any one individual is engaged should increase as the returns to criminal activity increase, and decrease as the costs of criminal activity increase. In addition, since both the returns and costs of crime are uncertain, the level of criminal activity should be inversely related to an individual's level of risk aversion. For any one individual, a criminal activity supply function can be derived directly from a problem where the individual maximizes his expected utility subject to his budget constraint.

Thus, in order to specify a reasonably complete aggregate crime function, it is necessary to measure the returns to crime, the costs of crime, and levels of risk aversion. Given these considerations, it is assumed that the total crime rate can be represented as a function of various exogenous variables (Z) and two partial measures of the quantity of criminal justice services: the conditional probability of arrest given that a crime has been committed (ARR/CR) and the conditional probability of imprisonment once arrested (PRS/ARR). The total crime rate function is then

$$(6) \quad TCR = g_1(Z, ARR/CR, PRIS/ARR)$$

The exogenous variables used during the estimation are percent urban, percent of the population that is 15- to 24-years-old, unemployment rate, per capita personal income and a variable for the South. In order to derive this type of crime rate equation, it is necessary to assume that each individual maximizes his expected utility where the choice between crime and legitimate activity is dictated by the expected net return associated with each type of activity and the sociological factors that effect the individual's perception of the risks involved in criminal activities. It is assumed that per capita personal income is a reasonable index of the gross returns to committing any one individual crime. Likewise, it is assumed that the unemployment rate is an appropriate index of the opportunity cost associated with any individual crime. Thus, the crime rate should increase as per capita personal income increases since the return to any one crime should increase, and crime should increase as the unemployment rate increases since, on margin, the return to legitimate activities decreases with higher unemployment rates. The percent of population that is 15- to 24-years-old is included to reflect the hypothesis that because of higher unemployment, lower earnings and other factors, youth tend to perceive the expected net returns as higher than older persons (or, that the young are far less risk-averse).

The urbanization variable and the probabilities of arrests and imprisonment are included as measures of the probability and severity of punishment. Highly urbanized areas tend to include larger concentrations of poor and disadvantaged individuals, as well as concentrations of wealth (i.e., crime opportunities). It has also been hypothesized that urban areas, being less personal, have fewer community constraints upon criminal activity. Thus, an individual may perceive his probabilities of arrest there as much lower than in rural communities. The two deterrence variables--arrest per crime and prisoners per arrests--reflect portions of the vector $\underline{Q}$ measuring the quantity of various criminal justice services and should be inversely related to the crime rate.

A logarithmic form was assumed for equation (6), and the crime rate function to be estimated empirically was

$$(7)\quad TCR = \gamma_1 + \gamma_2 \cdot PIN + \gamma_3 \cdot UNR + \gamma_4 \cdot YOUTH + \gamma_5 \cdot URB + \gamma_6 \cdot (ARR/CR) + \gamma_7(PRIS/ARR) + \gamma_8 \cdot SOUTH$$

where PIN = per capita personal income

UNR = unemployment rate

YOUTH = percent of the population between the ages 15- and 24-years old

URB = percent of the population within urban areas

ARR/CR = probability of arrest once a crime is committed

PRIS/ARR = probability of imprisonment once arrested

SOUTH = a variable representing the South

and the γ_i's are the parameters to be estimated.

It would be possible to "close" the system of behavioral equations given by (5) and (7) if the probability of arrest and the probability of imprisonment could in turn be related to total criminal justice expenditures. However, it has been claimed that the probability of arrest and the probability of imprisonment are only two of the many components of criminal justice services. Therefore, it is possible that use of a simple relationship between the probability of arrest or the probability of imprisonment and total expenditures would be inappropriate, since there are a large number of implicit trade-offs between various components of $\underline{Q}$ imbedded in total criminal justice expenditures.

If there were observations on $\underline{Q}$ and inputs into the production of $\underline{Q}$, one could estimate the vector of equations

$$(8) \quad Q = h(E)$$

where $\underline{E}$ is a vector of inputs into the production of criminal justice services. In the next section, such a production function will be assumed in order to derive the various input demand functions. However, we do have observations for two of the components of $\underline{Q}$ and observations for most of the inputs--employment in law enforcement, judicial work, prosecution, defense, and corrections. Since criminal justice services are highly labor intensive, the omission of capital should not bias estimates of (8) significantly.

Theoretically, the production of arrests and imprisonments should be related to the level of some of the inputs and the environment in which they are employed. For the arrest equation, the number of police personnel should positively affect the number of arrests. The other four labor inputs might have an insignificant impact. For the arrests production function, the environment is measured by the number of crimes, the percent urban, and a variable for the South. Inclusion of the crime variable simply removes the requirement that the number of arrests be proportional to the number of crimes since, all other things equal, a doubling of the number of crimes should not necessarily double the number of arrests. The urbanization variable is included to reflect a "catch-all" measure of community attitude. The South variable is used in the arrest equation, as it is used throughout, to reflect what seems to be a systematic difference between the behavior of the South and the rest of the U.S.

For the imprisonment production function, the number of judges, prosecutors and, in particular, corrections personnel should enter positively, with the effect of defenders and law enforcement personnel uncertain. The number of arrests is included since the number of prisoners should increase when arrests increase. Letting E_j ($j = 1,\ldots,5$) represent, respectively, the number of employees in law enforcement, judicial prosecution, defense, and corrections, arrest and imprisonment production are:

$$\text{(9)} \quad ARR = \sum_{j=1}^{5} \lambda_j \cdot E_j + \lambda_6 + \lambda_7 \cdot CR + \lambda_8 \cdot URB + \lambda_9 \cdot SOUTH$$

$$\text{(10)} \quad PRIS = \sum_{j=1}^{5} \mu_j \cdot E_j + \mu_6 + \mu_7 \cdot ARR + \mu_8 \cdot SOUTH$$

where the λ's and μ's are parameters to be estimated and all variables are measured in their natural logarithm.

The combination of equations (5), (7), (9), and (10), represent four equations and, if the level of each labor input were known, four unknowns. This system relates total criminal justice expenditures to crime rates which are related to two components of the vector measuring the quantity of total criminal justice services. These quantities are related to the inputs used to produce criminal justice services. The missing step, in order to close the system, is to relate the inputs to the quantity of criminal justice services. The next section develops a set of input demand functions.

2. Input Demand Functions

Given the level of output, the demand for any input is a function of the price of that input and all other possible inputs, as well as the quantity of output. If one is willing to assume certain forms for the production function of any output, it is possible to derive forms for the input demand function. For the remainder of this section, Q will be treated as a scalar, and it will be assumed that the output of total criminal justice services can be represented by a Cobb-Douglas production function of the labor inputs. Alternatively, treating the quantity of criminal justice services as a vector or including measures of capital does not change the algebra significantly in terms of its implications. It does, however, change the algebra significantly in terms of its messiness.

It is well known that solution of

$$(11) \quad \min \sum_{i=1}^{5} w_i \cdot E_i$$

$$\text{subject to:} \quad A \leq \prod_{i=1}^{5} E_i^{\xi_i}$$

which represents a producer's problem of minimizing costs subject to a requirement for a certain level of output, $\underline{Q}$, results in a set of long-run equilibrium input demand functions:

$$(12) \quad E = \frac{1}{\xi} \cdot Q + W \cdot w$$

where $\xi = \sum_{i=1}^{5} \xi_i$, and

$$W = \frac{1}{\xi} \begin{bmatrix} -(\xi_2 + \xi_3 + \xi_4 + \xi_5) & \xi_2 & & \xi_5 \\ \xi_1 & -(\xi_1 + \xi_3 + \xi_4 + \xi_5) & & \xi_5 \\ \xi_1 & \xi_2 & \ddots & \xi_5 \\ \xi_1 & \xi_2 & & \xi_5 \\ \xi_1 & \xi_2 & & -(\xi_1 + \xi_2 + \xi_3 + \xi_4) \end{bmatrix}$$

In (12) $\underline{E}$ represents a vector of the E_i's, $\underline{Q}$ represents a vector with each element identically equal to $\underline{Q}$, and $\underline{w}$ represents vector wage rates (w_i) for each labor input.

Estimation of these input demand functions faces the same problem as that faced in the first section--there is no measure of $\underline{Q}$. However, in a long-run equilibrium with constant wages, output, and associated input demands, there would exist a set of parameters (ε_i) such that total criminal justice expenditures, CJ, and w would approximate Q:

$$(13) \qquad Q = CJ + \sum_i w_i \cdot \varepsilon_i$$

Note that the sum of the ε_i's must equal minus one since increasing all wages by 10 percent would decrease the total quantity of criminal justice services by 10 percent if total criminal justice expenditures remained constant. Replacing Q by (13) in (12) gives

$$(14) \qquad E = \frac{1}{\xi} \cdot CJ^* + W_2 \cdot w^*$$

where

$$W_2 = \frac{1}{\xi} \begin{bmatrix} -(\xi_2 + \xi_3 + \xi_4 + \xi_5) + \varepsilon_1 & & \xi_1 + \varepsilon_5 \\ \xi_1 + \varepsilon_1 & \ddots & \\ \vdots & & \\ \xi_1 + \varepsilon_1 & & -(\xi_1 + \xi_2 + \xi_3 + \xi_4) + \varepsilon_5 \end{bmatrix}$$

where the superscript * represents long-run equilibirum values for E, CJ, and w.

Assuming the existence of an equilibrium, the equations (14) could be estimated straightaway. If, however, there are significant costs or uncontrollable lags in the adjustment of any labor input to its optimal level, given an exogenous change, a long-run adjustment mechanism might determine the disequilibrium values for each input. It is assumed that the adjustment mechanism for the inputs can be represent by

$$(15) \quad E_t - E_{t-1} = \beta \cdot (E^* - E_{t-1})$$

where $\underline{\beta}$ is a five-by-five matrix of adjustment coefficients, (β_{ij}) and E_t is a vector of employment in each category at time $\underline{t}$. This assumed adjustment mechanism implies that the change in employment, in each category, between any two time periods is dependent upon the difference between optimal long-run employment $\underline{E}^*$ and actual employment in the previous period for every category of labor. That is, the percentage change in police employment from one year to the next is a log linear weighed sum of the difference between optimal long-term employment in every other category—judicial, prosecution, defense, and corrections--and actual employment in that category in the previous period, as well as the difference between its optimal long-run employment level and actual employment in the previous period. The weights used to derive this sum are simply the β_{ij}'s.[9] Substituting (14) into (15) and rearranging gives

$$(16) \qquad E_t = \beta\cdot\frac{1}{\xi}\cdot CJ^* + B\cdot W_2\cdot w^* + B\cdot E_{t-1}$$

$$\text{where } B = [I-\beta] = \begin{bmatrix} 1-\beta_{11} & -\beta_{12} & \cdots & -\beta_{15} \\ -\beta_{21} & 1-\beta_{22} & & \\ & & \ddots & \\ -\beta_{51} & \cdots & & 1-\beta_{55} \end{bmatrix}$$

Estimation of (16) is possible if appropriate representations of $\underline{CJ}^*$ and $\underline{w}^*$ can be obtained. It will be assumed that the expectations operator for $\underline{CJ}^*$ is such that the expected level of $\underline{CJ}^*$ is equal to a log linear function of present criminal justice expenditures and time. Further, it is assumed that the expectations operator for $\underline{w}^*$ is simply equal to $\underline{w}$. The equations defined by (5), (7), (9), (10), and

$$(17) \qquad E_t = \beta\cdot\frac{1}{\xi}\cdot CJ + \beta\cdot\frac{1}{\xi}\cdot\tau\cdot TIME + \beta\cdot W_2\cdot w + \beta\cdot E_{t-1}$$

give nine equations tracing the relationship between criminal justice expenditures, total crime rate, the levels of two components of criminal justice services, and the demand for criminal justice personnel. Before estimating this system of equations, the next section will discuss the available data.

C. DATA SOURCES

The data used for the analysis are a pooled cross-sectional time series of 50 states for the period 1971 to 1974. The state was chosen as the level of analysis because data on states are more readily available on a consistent basis across sectors than data on smaller governmental units. Also, since the allocation of governmental responsibilities between state and local units for the delivery of criminal justice services varies from state to state, comparisons for geographical areas below the state level would obscure relationships. The sectors included are

Police -- (Law Enforcement) included all government agencies whose function is that of enforcing law, preserving order and apprehension of violators. Such agencies include police departments, sheriffs' departments, special police forces maintained by government agencies outside of the criminal justice system, and lock-ups and tanks holding prisoners for 48 hours or less.

Judicial — encompasses all courts and activities associated with courts such as law libraries, grand juries, petit juries, etc. Courts include appellate courts, major trial courts, and courts of limited jurisdiction.

Prosecution -- includes the civil and criminal justice activities of the attorneys general, district attorneys, States' attorneys, corporation counsels, solicitors, and legal departments.

Defense -- (Indigent Defense) includes activities associated with the right of persons to have legal counsel and representation: office of the public defender and other government programs which pays fees for appointed counsel.

Corrections — includes government agencies whose activities or functions involve the confinement and rehabilitation of adult and juvenile offenders. Institutions with the authority to hold prisoners for more than 48 hours are included here, such as prisons, reformatories, jails, etc. Also included are government agencies, civil institutions involved in diagnosis, evaluation, pardon, parole and probation activities.

A lengthy time series on employment and expenditures in these sectors is not available. All criminal justice employment and expenditure figures were taken from the LEAA, Expenditure and Employment Data for the Criminal Justice System (1971-1974). Although the LEAA surveys began in 1968, definitional changes prohibited the use of any data prior to 1970. Criminal justice expenditures, and all other dollar figures in this analysis, were deflated by the consumer price index. The employment figures are full-time equivalent employees in each sector.

In 1974, police protection agencies accounted for 58.5 percent of total criminal justice employment, judicial employment was 12.9 percent, prosecution employment 4.9 percent, and in correctional agencies, 22.2 percent. Employment in indigent defense and miscellaneous agencies, combined, accounted for only 1.3 percent of total criminal justice employment.

In order to develop an equation for the indigent defense sector, it was assumed that, regardless of method of delivery, the bulk of total expenditures for defense by state and local governments is for purchasing defender services. Therefore, dividing total expenditures of indigent defense agencies by the wage rate for defenders yields the full-time equivalent number of defender personnel that can be purchased. Wage rates were determined by dividing the payroll for indigent defense by the number of full-time equivalent employees in each state. In the five states which did not have indigent defense employees on government payrolls in 1971, deflated 1972 wage rates were used.

Estimates of federal grants were derived from the same source. The criminal justice expenditure total represents expenditures from all sources by state and local governments for criminal justice services, with intergovernmental expenditures between state and local levels netted out. The estimate of federal grants is the difference between total state and local criminal justice expenditures and criminal justice expenditures from own sources. Total state and local government expenditures are from the Census Bureau's annual publication, Governmental Finance.

Estimates of crime rates are from the FBI's Uniform Crime Report. There are many problems associated with the use of UCR data, as noted in the literature.[10] In particular, reporting bias can be introduced either by incomplete reporting of crime by the public to the police, or by incomplete reports of police to the FBI. The extent of such underreporting has been measured in the recent series of victimization surveys. Although recognizing the shortcomings in the UCR data, these were accepted as the only reasonably consistent source of crime data available for all the states. However, in 1973 and 1974, UCR property crime rates were modified to include all thefts, whereas previously this category included only thefts over 50 dollars. Therefore, 1973 observations on this variable were weighted by the estimated ratio of property crimes over 50 dollars to total property crimes in 1972.

The probability of arrest figures was estimated using the number of reported arrests per state, provided by the UCR office, for the years 1971 to 1974. The probability of arrest equals the ratio of Part I arrests per 1,000 population to Part I crimes per thousand population. The data on arrests per 1,000 population were based on reported arrest and reporting population. In 197[illegible], the reporting population was more than 75 percent in

35 states and less than 40 percent in 5 states. Similarly, the probability of imprisonment measure is the ratio of prisoners in state institutions at end of year to Part I arrests in that year. Prison population statistics were available from the advance reports of the Census of State Correctional Facilities sponsored by LEAA.

The youth variable, the percent of the population between 15 and 24 years-of-age, was developed by using 1970 and 1975 estimates of population in these age categories and interpolating to obtain the annual estimates. The 1970 and 1975 estimates were taken from the National Planning Association's Regional Economic Projections Series data base. Estimates of per capita personal income were taken from the 1974 BEA, Survey of Current Business. The percent of population in urban areas is defined as the population in SMSA's. Yearly figures were taken from the Uniform Crime Report which updates Census decennial estimates of urban population reports from the state UCR offices. To arrive at an annual wage rate for each sector total payroll was divided by the number of full-time equivalent employees and then deflated by the implicit price deflator.

D. ESTIMATES OF THE MODEL STRUCTURE

The model described in section B determines total criminal justice expenditures, the total crime rate, two components of criminal justice output, and the demand for inputs into the production of criminal justice services. To summarize, the model is

$$\text{(18)} \quad \text{(a)} \quad CJ = \alpha_1 + \alpha_2 \cdot TCR + \alpha_3 \cdot GRANTS + \alpha_4 \cdot EXP$$

$$\text{(b)} \quad TCR = \gamma_1 + \gamma_2 \cdot PIN + \gamma_3 \cdot UNR + \gamma_4 \cdot YOUTH + \gamma_5 \cdot URB + \gamma_6 \cdot (ARR/CR) + \gamma_7 \cdot (PRIS/ARR) + \gamma_8 \cdot SOUTH$$

(c) $\mathrm{ARR} = \sum_{j=1}^{5} \lambda_j \cdot E_j + \lambda_6 + \lambda_7 \cdot \mathrm{CR} + \lambda_8 \cdot \mathrm{URB} + \lambda_9 \cdot \mathrm{SOUTH}$

(d) $\mathrm{PRIS} = \sum_{j=1}^{5} \mu_j \cdot E_j + \mu_6 + \mu_7 \cdot \mathrm{ARR} + \mu_8 \cdot \mathrm{SOUTH}$

(e) $E_t = \beta \cdot a_1 \cdot \mathrm{CJ} + \beta \cdot a_2 \cdot \mathrm{TIME} + \beta \cdot W_2 \cdot w + \beta \cdot E_{t-1}$
$+ a_4 \cdot \mathrm{SOUTH}$
$a_1 = \frac{1}{\xi} \qquad a_2 = \frac{\tau}{\xi}$

Note that a variable for the South has been added to the input demand functions (18e). This has been introduced because of observed institutional differences between the South and other regions, with respect to law enforcement and criminal justice policies resulting--for example--in higher rates of imprisonment than in other regions of the country.

1. Restrictions of the Estimated Parameters

The disequilibrium adjustment mechanism specified in Section B.2 has a variety of implications for the empirical estimates of the parameters of (18e). Repeating this adjustment mechanism for convenience

$$E_t - E_{t-1} = \beta[E^* - E_{t-1}] \tag{19}$$

If $[E^* - E_{t-1}]$ equaled the unit vector, equation (19) would imply

$$E_{i,t} - E_{i,t-1} = \sum_j \beta_{ij} \text{ for all } \underline{i} \tag{20}$$

If all of the β_{ij}'s were positive then the sum in (20) would need to be less than two for at least one i if the process (19) converged.

The long-run equilibrium properties of the input demand functions can be investigated by repeated substitution for E_{t-1} in (19). This gives

$$(21) \quad E_t = [I + B + B^2 + \ldots\ldots + B^t]\, \beta E^* + B^n E_o$$

$$B = (I - \beta)$$

If B^t converges to zero as t approaches infinity, then the term in brackets on the right-hand side of (21) converges to β^{-1} and E_t converges to E^* as t approaches infinity. A necessary and sufficient condition for B^t to approach zero is that all the characteristic roots of B lie within the unit circle. There are sufficient conditions available to constrain the estimated elements of the matrix B such that its characteristic roots lie within the unit circle. However, the characteristic roots derived from the unconstrained estimates of B are examined later in the paper.

Returning to (18e), there are two additional constraints the estimated parameters should fulfill. First, the vector of coefficients $\beta \cdot a_1$, the estimated parameters for total criminal justice expenditures, is

$$(22) \quad \beta \cdot a_1 = \frac{1}{\xi} \cdot \begin{bmatrix} \sum_j \beta_{1j} \\ \sum_j \beta_{2j} \\ \sum_j \beta_{3j} \\ \sum_j \beta_{4j} \\ \sum_j \beta_{5j} \end{bmatrix}$$

Since an estimate of (18e) will give estimates of each of the β_{ij}'s and $\beta \cdot a_1$, we will have five separate estimates of $1/\xi$. If the system of equations is a reasonable approximation, these five estimates of $1/\xi$ should be approximately the same. Also, since ξ is the sum of the coefficients of the Cobb-Doublas production function, it can be determined whether there are increasing, decreasing, or constant returns to scale in the production of criminal justice services. Obviously if ξ is greater than one, there are increasing returns; ξ less than one implies decreasing returns; and ξ equal to one implies constant returns to scale in all the labor inputs.

The matrix of estimated parameters for the wage rates given in (18e) is $\beta \cdot W_2$. The elements of this matrix are given on the next page. Each of the estimated $\beta \cdot W_2$ is a weighted sum of the production function parameters, ξ_i, and the weights used to transform total expenditures into a quantity index, ϵ_i. Summing across any row of this matrix gives

$$(24) \qquad \frac{1}{\xi} \sum_{j=1}^{5} \beta_{ij} \sum_{k=1}^{5} t_k = - \frac{1}{\xi} \sum_{j} \beta_{ij} \text{ for } i = 1, \ldots, 5$$

Thus, the sum of the wage parameters for any one of the disequilibrium input demand functions should be approximately equal to the sum of the cross adjustment and own adjustment coefficients for that particular input, divided by the sum of the parameters of the criminal justice production function. Since we have estimates of the β_{ij}'s from (18e) and estimates of $1/\xi$ from (22) the condition implied by (24) can be easily examined.

A more intuitive explanation of why the sum of the rows of $\beta \cdot W_2$ should equal the relationship given in (24) is that, if it were not necessary to replace an actual measured quantity of criminal justice services by criminal justice expenditures, then the matrix W_2 would contain only a set of own and cross wage elasticities for each of the inputs. If the characterization of the criminal justice services production function is appropriate and the derived input demand function a reasonable approximation, then each row of this adjusted W_2 matrix would sum to zero since, given a fixed quantity of services, a doubling of every input price should not change the amount of any input. Or, the sum of the own and cross wage elasticities should be identically equal to zero. Since the sum of the ϵ_i's is equal to minus one, (24) should hold. If (24) did not hold, it could be attributed to either the initial specification of the model, replacement of criminal justice output by expenditures, or the omission of capital. If the relationship (24) is fulfilled by the estimates of (18e), then the hypothesized model of the criminal justice system cannot be rejected.

In this section, we have derived a set of restrictions on the estimated coefficients of (18e). These restrictions coupled with the discussion given for equations (18a-18d) give a large number of *a priori* restrictions which the model should fulfill. However, the restrictions on the first four equations are, as for most econometric studies, artificial. There is a large choice of potential variables for selection in the specification of these four equations, and those variables that enter insignificantly or with the wrong sign are simply dropped. The remaining exogenous variables that do enter the equations can be explained much as they were in section A, and the first four euqations can be evaluated for their "sensibilility." However, the restrictions derived on the estimates of (18e) are derived directly from the model. They are a mixture of sign and summation constraints and are stronger than the usual sign restrictions on (18a-18d) since fulfillment of the former restrictions imply that the hypothesized model of the criminal justice system cannot be rejected.

1. Empirical Estimates

A discussion of the empirical estimates of (18) first considers the estimates for total criminal justice expenditures, total crime rate, arrests and imprisonments. Later, the input demand functions are presented. Before proceeding to the estimates, the estimation technique will be briefly discussed.

As has been mentioned previously, all variables, with the exception of time, have been measured in their natural logarithms. For the input demand functions and the arrest and imprisonment functions, the logarithmic form is appropriate if the theoretical model presented for the criminal justice system is accepted. Given the logarithmic form for (18c-18e), a logarithmic form was selected for expenditure and crime rate equations in order to ease the discussion of the final results.

The data available to estimate this sytem of equations were a set of pooled cross-section and time series data for all states between 1970 and 1974. The result was 200 observations (given the lag terms) for all states. The pooling of time series and cross-section data for estimating the dynamic model, such as that given by the above set of equations, does give one pause, especially since the observation period is only four years. However, a quick review of the assumptions behind the model and the characteristics of the observations does make the use of the pooled cross-section and time series data acceptable for such a limited time.[11] First, the model assumes that the previous period observations of employment in each category contain all (or nearly all) of the information that a longer time series of employment by category would contain in terms of determining employment in this period. The limited number of years simply prevents the test of this assumed lag structure. (A limited test of the validity of this assumption is made by determining how well the constraints implied by the disequilibrium model are fulfilled by the final estimates.) Second, the variability of the dependent variables across states allows the observation of at least as wide a range of combinations as contained in any time series. This wide range of information can be used if any systematic difference between states can be controlled.

The region variable for the southern states was included since "eyeball" empiricism would seem to indicate a systematic difference. Also, since we are searching for a model representative of the nation as a whole, each observation was weighted by the state's population. For example, Pennsylvania has five times the population of Oklahoma, and, given the implicit assumption that each state's observation represents the average of all individuals in that state, it seemed reasonable to weight the observation for Pennsylvania five times more heavily than the observation for Oklahoma. With these adjustments and limitations, the system of nine equations was estimated by using three-stage least squares. However, examining only the input demand functions (18e), note that each input demand function has identical explanatory variables. In this particular case, the ordinary least squares estimates for (18e) are identical to three-stage least squares estimates and Zellner's recommended procedure for estimating seemingly unrelated regression equations.[12] Thus, three-stage least squares was used for the system of all nine equations. There are a variety of problems with a simultaneous estimation technique, including the presumption that the model, as specified, includes all of the important exogenous variables. As has been discussed by Fisher, the omission of variables from a simultaneous system and the imposition of a simultaneous estimating technique can induce significant biases in the estimated parameters.[13]

a. Expenditures, the crime rate, and output

The estimated expenditure, crime rate, and output equations are[14]

$$\begin{array}{lllllllll}
(25a) & CJ = & -5.45 & + & .399 \cdot TCR & + & .0341 \cdot GRANTS & + & 1.03 \cdot EXP \\
 & & (-26.9) & & (15.4) & & (1.90) & & (56.5)
\end{array}$$

$$R^2 = .987 \qquad F(3,196) = 5250$$

(25b) $$TCR = \underset{(-7.81)}{-11.5} + \underset{(4.76)}{.720} \cdot PIN + \underset{(3.08)}{.179} \cdot UNR + \underset{(5.41)}{1.32} \cdot YOUTH +$$

$$\underset{(9.03)}{.855} \cdot URB \underset{(-4.33)}{-.287} \cdot (ARR/CR) - \underset{(-4.27)}{.200} \cdot (PRIS/ARR) + \underset{(5.14)}{.242} \cdot SOUTH$$

$$R^2 = .629 \quad F(7,192) = 40.1$$

(25c) $$ARR = \underset{(6.93)}{2.33} + \underset{(4.42)}{.337} \cdot E_1 + \underset{(9.12)}{.681} \cdot CR - \underset{(-5.97)}{.656} \cdot URB +$$

$$\underset{(2.77)}{.105} \cdot SOUTH$$

$$R^2 = .957 \quad F(4,195) = 1110.$$

(25d) $$PRIS = \underset{(-7.81)}{-2.25} + \underset{(1.30)}{.0877} \cdot E_3 - \underset{(-2.32)}{.0767} \cdot E_4 + \underset{(6.48)}{.497} E_5 +$$

$$\underset{(8.14)}{.562} \cdot ARR + \underset{(8.53)}{.531} \cdot SOUTH$$

$$R^2 = .935 \quad F(5,194) = 570.$$

The results of these estimates are rather encouraging in terms of the number of significant variables, the R^2, and the F-tests. An examination of the t-statistics, presented in parenthesis under each parameter, shows only one marginally significant variable. Also, examination of the arrest and imprisonment functions indicates that many of the inputs did not enter into these components of criminal justice services. For example, only police employment (E_1) entered the arrest equation with an appropriate positive sign. Similarly, prosecution (E_3) and corrections (E_5) entered the imprisonment prodcution function with significant positive signs while defense (E_4) entered with a nonzero negative sign. Later in this Appendix, the full implications of these four equations and the input demand functions will be discussed. For the moment, each equation will be separately discussed.

Imprisonments. The imprisonment production function confirms the empirically obvious proposition that the southern states tend to imprison more people than the rest of the United States. In fact, all other things equal, southern states imprison 53 percent more people than other states. Also, the relationship between imprisonments and arrests is increasing at the margin--a 10 percent increase in arrests increases imprisonments by 5.6 percent--but the relationship between imprisonments and arrests is hardly proportional. This lack of proportionality is probably due to a combination of the capacity constraints of prisons, increases in plea bargaining and diversion with increased arrests, and a desire on the part of society not to incarcerate more than a minimal proportion of its members at any one time. The parameter for corrections employment is of the appropriate sign and magnitude--a 10 percent increase in corrections employment increases imprisonments by nearly 5 percent.

The relationship between imprisonments and prosecution employment seems reasonable given the estimated parameter for arrests and capacity constraints. A 10 percent increase in prosecution employment will increase imprisonments by slightly less than 1 percent. Since defenders are charged with the responsibility of protecting the rights of arrested individuals, the negative sign for defense employment seems eminently plausible. All other things equal, an increase in defense employment should require more time and effort on the part of prosecution and judicial employees in order to incarcerate an individual. Thus, the implication that a 10 percent increase in defense employment will decrease imprisonments by less than 1 percent is plausible.

The omission of judicial employment is, however, perplexing. One would expect that an increase in the number of judges would decrease the incentive for plea bargaining and diversion, thus increasing the number of imprisonments. However, judges are also charged with the responsibility for overseeing defenders' rights. If the imprisonment production function is to be believed, it seems that judicial inputs are neutral in the production of imprisonments with the competing judicial goals of protecting societal and individual rights, cancelling each other out.

Arrests. The arrest production function indicates that the southern states are slightly more efficient at making an arrest once a crime is committed. All other things equal, arrests in southern states are 10 percent higher than arrests in the rest of the U.S. The urbanization parameter probably reflects a community's contribution to the productivity of criminal justice services in terms of the arrests component. The estimated parameter for the urban variable implies that a 10 percent increase in the number of people living in urbanized areas will decrease arrests by more than 6 percent.

The estimated parameter for the number of crimes implies that the relationship between arrests and number of crimes is less than proportional--a 10 percent increase in the number of crimes will increase arrests by 7 percent. This relationship does not seem unreasonable, given a fixed number of policemen. The relationship between arrests and police employment implies that a 10 percent increase in police employment will increase arrests by more than

3 percent. The implication is that there are markedly decreasingly returns to scale, in terms of arrests to increasing police employment, given a fixed number of crimes. However, the sum of the parameters on crime and police employment is one indicating constant returns to scale for the production of arrests when the primary inputs to arrest production--policemen and crimes --are doubled. The implication, given that more arrests decrease the number of crimes, is that a significant decrease in the number of arrests per officer will be observed with increasing police employment.

Total Crime Rate. The deterrence variables--the probability of arrest given commission of a crime and the probability of imprisonment once arrested --enter the crime rate equation logically. Roughly a 10 percent increase in the probability of arrest decreases the crime rate by nearly 3 percent, and a 10 percent increase in the probability of imprisonment decreases the crime rate by about 2 percent. Since the imprisonment variable is the stock of prisoners divided by arrests, increases in the imprisonment variable can reflect either more people sent to prison or longer sentences, or both.

The southern states have a higher reported crime rate by nearly 25 percent. A 10 percent increase in the urban population ratio increases the crime rate by 9 percent. The youth variable enters with the appropriate sign and significance. A 10 percent increase in the number of youths increases the crime rate by 13 percent. A magnitude greater than one is to be expected since the crime rate equation assumes that, all other things equal, crimes are proportional to total population. Thus, a parameter greater than one on youth is expected if it can be claimed that youths have a disproportionate propensity to commit crime. The parameter on the unemployment rate implies that a 10 percent increase in the number of unemployed individuals increases the crime rate by nearly 2 percent.

The role of per capita personal income as an index of the returns to crime is reflected in the estimate that a 10 percent increase in per capita personal income would increase the crime rate by 7 percent. The parameter for per capita personal income should be less than one, e.g., the supply of crime is increasing at a decreasing rate that returns per crime, if the choice between legitimate and illegitimate activity is based on the maximization of a concave (risk averse) utility function.

Criminal Justice Expenditures. The criminal justice expenditure function exhibits all the desired properties--it is positively related to total crime rates and federal grants to state and local governments for law enforcement activities as well as total state and local expenditures. Also, the proportional relationship between criminal justice expenditures and total state and local expenditures is not inconsistent with intuition. The relationship between criminal justice expenditures and crime is less than proportional. A 10 percent increase in the number of crimes results in a 4 percent increase in criminal justice expenditures. This less than proportional increase may reflect the concession that certain of the factors that increase crime rates--the number of young people and level of urbanization--are effectively uncontrollable variables and that are markedly decreasing returns to scale through operating only upon the controllable variables.

The marginally significant parameter on grants indicates that a 10 percent increase in the value of grants increases criminal justice expenditures by slightly more than 0.3 percent. This implies that, on average, a $1 increase in grants by the Federal Government to state and local governments for criminal justice services increases total criminal justice services by $0.50. This estimate, albeit uncertain, lies within the bounds of reason and is comparable to Gramlich and Galper's estimate of $0.65 per dollar for categorical grants.[15] Table A-1 summarizes the relationship between criminal justice expenditure and selected variables.

b. Input demand functions

The estimates of the parameters of the disequilibrium input demand functions are given in Table A-2. These estimates are encouraging in many respects. First, the R^2's are quite high. Second, criminal justice expenditures enter each demand function significantly with the appropriate positive sign. Their time parameters are plausible and, in four of five cases, significant. There has been a moderate upward trend in employment in law enforcement and prosecution with no upward trend in judicial. There has been a marked upward trend for defense with a 16.5 percent annual growth rate over the observation. This trend is probably capturing the effect of more recent rulings concerning the right of defendants to counsel. Given the number of explanatory variables included in the input demand functions, the slight downward trend in corrections of 3.6 percent per year is not inconsistent with intuition.

Every own wage elasticity enters the input demand functions with the appropriate negative sign. Also, each of the own wage elasticities is less than one, as should be expected in a disequilibrium model where immediate adjustment is not assumed. The southern states have significantly fewer defense personnel than the northern states. All other things equal, there are 40 percent fewer defenders in a southern state. The differences in the other categories are significant but of lower magnitude. The south tends to employ fewer law enforcement and prosecution personnel with more judicial and corrections personnel. The higher judicial employment probably reflects a larger number of justice of the peace positions in the south.

TABLE A-1

THE EFFECT OF CHANGES IN THE EXOGENOUS VARIABLES ON TOTAL CRIMINAL JUSTICE SYSTEM EXPENDITURES

Exogenous Variables	Percent Change in Criminal Justice Expenditures Due to a Ten Percent Increase in the Exogenous Variable
Grants[a]	0.34%
Total Expenditures	10.90
Total Crime Rate	3.99
Urban Population	3.41
Arrests Per Crime	-1.14
Prisoners Per Arrest	- .80
Personal Income Per Capita	2.87
Youth Age 15 to 24	5.28
Unemployment Rate	.71

[a] This elasticity estimate implies that a $1 increase in federal law enforcement dollars spent by state and local governments increase total state and local criminal justice expenditures by $0.50. This estimate is obtained by multiplying the parameter times the ratio of average total criminal justice expenditures to average grants.

Sources: Equations (25a) and (25b).

TABLE A-2

STRUCTURAL ESTIMATES OF THE CRIMINAL JUSTICE INPUT DEMAND FUNCTIONS

$$E_t = \beta \cdot a_1 \cdot CJ + a_2 \cdot TIME + \beta^{\circ} W_2 \cdot w + B \cdot E_{t-1} + a_3 \cdot SOUTH$$

Independent Variables	Law Enforcement $E_{1,t}$	Judicial $E_{2,t}$	Prosecution $E_{3,t}$	Defense $E_{4,t}$	Corrections $E_{5,t}$
CJ	.587 (15.3)	1.03 (12.3)	.556 (5.97)	.805 (2.30)	.614 (8.98)
Growth Rate TIME ($B \cdot a_2$x100)	-.12 (-.32)	-.46 (-.58)	1.33 (1.47)	13.1 (3.83)	-2.90 (-4.36)
w_1	-.464 (-6.75)	0.147 (-.99)	-.096 (-.58)	-1.867 (-3.00)	-.183 (-1.50)
w_2	-.138 (-2.90)	-.702 (-608)	-.272 (-2.35)	-.761 (-1.75)	-.260 (-3.07)
w_3	.037 (1.00)	-.111 (-1.40)	-.188 (-2.11)	.438 (1.31)	-.078 (-1.20)
w_4	-.014 (-.80)	.041 (1.08)	.018 (.42)	-.597 (-3.69)	-.009 (-27)
w_5	-.094 (-1.85)	-.284 (-2.60)	-.127 (-1.03)	1.663 (3.61)	-.176 (-1.96)
$E_{1,\ t-1}$	.567 (18.5)	-.468 (-7.06)	-.306 (-4.14)	-.647 (-2.33)	-.252 (-4.63)
$E_{2,\ t-1}$	-.020 (-1.17)	.595 (16.5)	-.023 (-.56)	.381 (2.50)	-.101 (-3.41)
$E_{3,\ t-1}$	-.008 (-.67)	.020 (.76)	.830 (28.7)	.094 (.85)	-.003 (-.12)
$E_{4,\ t-1}$	-.008 (-1.74)	.013 (1.38)	-.029 (-2.71)	.370 (9.14)	.016 (1.98)
$E_{5,\ t-1}$	-.097 (-5.88)	-.166 (-4.67)	-.025 (-.62)	.067 (.45)	.743 (25.6)
SOUTH	-.038 (-3.06)	.035 (1.31)	-.062 (-2.10)	-.310 (-2.77)	.048 (2.24)
R^2	.998	.989	.986	.868	.993
F(13,187)	6510.	1350.	1050.	102.	2240.

NOTE: R^2 and F-statistic are based on the OLS estimates.

The adjustment coefficients, derived from the estimated parameters for employment lagged one period, are given in Table 3. Referring to equations (15) and (16), the adjustment coefficients, β_{ij}, are equal to the identity matrix minus the matrix of coefficients estimated for the lagged employment variables. Or,

$$(26) \quad \beta = (I-B)$$

In order to interpret these coefficients, consider equation (15), which is repeated for convenience.

$$(27) \quad E_t - E_{t-1} = \beta \cdot [E^* - E_{t-1}]$$

The own adjustment coefficients are the diagonal elements of the matrix β which are given as the diagonal elements in Table A-3. The cross-adjustment coefficients are given along any row of the table. That is, the first row indicates the percentage change from one time period to the next in judicial, prosecution, defense, and corrections employment, given the percentage difference between optimal and previous period employment in law enforcement. Given the magnitude of the parameters in the first row, it is obvious that the behavior of law enforcement is the primary driving force in the other four sectors. The cross adjustment coefficient between each other category of employment and law enforcement is greater than its own adjustment coefficient. In other words, the weight given the difference between optimal long-run equilibrium law enforcement employment and law enforcement employment in the previous period is greater than the weight given the difference between optimal long run own employment and own employment in the previous period.

TABLE A-3

ESTIMATED ADJUSTMENT COEFFICIENTS FOR CRIMINAL JUSTICE INPUT DEMAND FUNCTIONS: $\beta = I-B$

Lagged Employment	Law Enforcement $E_{1,t}$	Judicial $E_{2,t}$	Prosecution $E_{3,t}$	Defense $E_{4,t}$	Corrections $E_{5,t}$
$E_{1,t-1}$	.433	.468	.306	.647	.252
$E_{2,t-1}$	.020	.405	.023	-.382	.101
$E_{3,t-1}$	.008	-.020	.169	-.094	.003
$E_{4,t-1}$	.008	-.013	.029	.630	-.016
$E_{5,t-1}$	.097	.166	.025	-.067	.257

Source: Table 2.

One of the possible problems with the estimated long run input demand functions is the multi-colinearity among the various lagged employment variables and among the wage variables. Although the estimated parameters might be correct since multi-colinearity still gives unbiased estimates, it is not certain that the parameter estimates are correct. Also, the estimated standard error of the parameter estimates is too high, and, hence, the t-statistics are too low. The possibility of multi-colinearity effecting the estimates of the parameters and their associated standard error is relatively high since the simple correlations between the lagged employment variables exceeds 0.9 and between the wage rates exceeds 0.8. As it will be shown later, the existence of multi-colinearity does not affect the tests of the constraints, which use a sum of the estimated parameters; however, it does affect the interpretation of each individual parameter. If multi-colinearity is adversely affecting the parameter estimates, it has the effect of overidentifying each of the individual parameters such that it is impossible to ferret out exact estimates of the individual parameters. Given that the estimate of the parameters is the best that we can develop even if multi-colinearity is adversely affecting the estimates, we will use these parameters and derive their full implications.

In order to determine the long-term effects of changes in criminal justice expenditures, time and wage rates, it is necessary to solve the disequilibrium input demand functions for their long-run equilibrium values. The disequilibrium input demand function is

$$(28) \qquad E_t = B \cdot E_{t-1} + \beta \cdot a_1 \cdot CJ + \beta \cdot a_2 \cdot TIME + \beta \cdot W_2 \cdot w + a_3 \cdot SOUTH$$

Setting $E_t = E_{t-1} = E$ gives

$$(29) \qquad E = [I-B]^{-1} \left(\beta \cdot a_1 \cdot CJ + \beta \cdot a_2 \cdot TIME + \beta \cdot W_2 \cdot w + a_3 \cdot SOUTH \right)$$

Thus, the change in long-run eqilibrium values of employment can be determined by solving for $(I-B)^{-1}$ and multiplying by the appropriate coefficients. The results of this exercise are given in Table A-4, which shows for each labor input the percentage change in that particular input given a 1 percent change in an exogenous variable. All of the values for total criminal justice expenditures are near one. This implies that there are virtually constant returns to scale in the production of criminal justice services. The long-run time variable indicates a slight positive trend in employment for law enforcement, judicial and prosecution with a very strong positive trend in defense employment. There is also a very strong negative trend in corrections employment.

As would be expected, all of the wage effects are greater in magnitude in the long-run than in the short. The long-run wage elasticities for law enforcement, prosecution, and defense are all near minus one. The long-run wage elasticity for judicial is low at -1.5, and the long-run wage elasticity for corrections is high at -0.2. A possible explanation for the low judicial wage elasticity is that increases in judicial wages are accompanied by changes to a more centralized judicial system (with presumably better trained and qualified judges) from a more decentralized system utilizing justices of the peace. The high wage elasticity for corrections might simply be a reflection that corrections are near the end of the line in terms of the flows through the criminal justice system. Any response of decreasing corrections employment due to an increase in corrections wages is mitigated by the fact that the demand for corrections employment is generated by the other four parts of the system. Examining the column for corrections employment, note that with the exception of the judiciary all of the cross-wage elasticities are negative and the judiciary cross-wage elasticity with respect to corrections is a very small positive.

TABLE A-4

PERCENTAGE CHANGE IN LONG RUN CRIMINAL JUSTICE EMPLOYMENT DEMAND DUE TO ONE PERCENT CHANGES EXPENDITURES AND WAGES

Independent Variable	Law Enforcement E_1	Judicial E_2	Prosecution E_3	Defense E_4	Corrections E_5
CJ	.968	.908	.858	.961	.953
W_1	-1.083	1.010	1.504	-1.001	-.083
W_2	-.085	-1.539	-.760	-2.188	-.419
W_3	.220	-.429	-1.353	-.000	-.295
W_4	.003	.141	.247	-.847	-.148
W_5	-.149	-.322	-.733	2.517	-.164
Annual Growth Rate TIME	2.8%	3.1	2.8	19.6	-12.6

Sources: Table 1 and equation (29).

The implication is that corrections employment falls with increases in wages for other sectors. Since employment in the other sectors falls with increases in wages, their output will decrease and the requirement for corrections personnel will decrease. Similar interpretations can be made for all of the cross-wage elasticities.

So far, the model seems to give generally well-behaved and significant results. For example, even though multi-colinearity should result in underestimates of the t-statistics, half of the cross-adjustment wage and employment terms enter significantly. One further check of the model is to determine whether the estimates fulfill the constraints given by equations (20), (22), and (24). Equation (20) required that the estimated coefficients of B not be all of the same sign or not have a sum greater than 2. A quick examination of Table 3 will indicate that this mild constraint is fulfilled. The stronger stability condition required that the characteristic roots of (I - β) lie within the unit circle. There are only   significant roots since (I - β) is nearly singular. These roots are

Equation (22) is repeated for convenience,

$$(30) \quad \beta \cdot a_{1\cdot} = \frac{1}{\xi} \cdot \begin{bmatrix} \sum_j \beta_{1j} \\ \sum_j \beta_{2j} \\ \sum_j \beta_{3j} \\ \sum_j \beta_{4j} \\ \sum_j \beta_{5j} \end{bmatrix}$$

This relationship gives five separate estimates of ξ. The separate estimates of ξ from each input demand function are

(31)

$$\xi = \begin{bmatrix} .962 \\ .980 \\ .999 \\ .917 \\ .972 \end{bmatrix}$$

Obviously the five estimates all lie relatively close together, and the differences can easily be attributed to the estimation error.

Also, from the long-run equilibrium input demand function given by equation (14), it is obvious that the estimate of $\underline{\xi}$ obtained from the short-run relationship should be similar to the estimate of $\underline{\xi}$ obtained from the long run relationship. Table 4 displays the long-run change in each input demand given a change in total criminal justice expenditures. This change should equal $1/\xi$. Table A-5 exhibits the implied estimates of $\underline{\xi}$ from the short-run and the long-run input demand functions. As can be seen from the table, the differences between the two sets of estimates are not substantial. Since all the estimates are nearly one, it is possible to conclude that there are constant returns to scale in the production of criminal justice services. That is, if all labor inputs--law enforcement, judicial, prosecution, defense, and corrections--are doubled, the total output of criminal justice services will double. The $\underline{\xi}$ is a measure of returns to scale since $\underline{\xi}$ is the sum of the unobserved parameters for the inputs in the criminal justice services production function.

The second set of constraints deals with the estimated parameters for wages. This constraint implies that the sum of the estimated wage parameters should equal $(-\sum_j \beta_{ij}/\xi)$. Table A-6 displays the sum of these parameters and compares it to the estimate of $(\sum_j \beta_{ij}/\xi)$ implied by that respective equation. In all cases the sum of the wage parameters is less than the constraint would imply.

TABLE A-5

COMPARISON OF SHORT AND LONG RUN IMPLIED ESTIMATES FOR ξ AND THE SUM OF THE LONG RUN WAGE ELASTICITIES

	Estimates of ξ		Wage Elasticities		
Input	Short-Run (1)	Long-Run (2)	Sum (3)	Constraint (4)	Difference (4)-(3)
Law Enforcement	.962	1.033	-1.094	-.968	.126
Judicial	.980	1.102	-1.176	-.908	.268
Prosecution	.999	1.165	-1.094	-.858	.236
Defense	.917	1.040	-1.519	-.961	.558
Corrections	.972	1.049	-1.109	-.953	.156

Sources: Tables 2 and 4.

TABLE A-6

THE RESTRICTION ON ESTIMATED SHORT-RUN WAGE PARAMETERS

$$\beta \cdot W_2 \cdot 1 = \beta \cdot a_1$$

Input	Sum of Estimated Wage Parameters (1)	Constraint Estimated $-\frac{1}{\xi}\Sigma\beta_{ij} = -\beta \cdot a_1$ (2)	Difference (2) - (1)
Law Enforcement	-.673	-.585	.088
Judicial	-1.203	-1.108	.095
Prosecution	-.665	-.645	.020
Defense	-1.121	-.917	.204
Corrections	-.706	-.626	.080

Source: Tables 2 and 4.

This difference continues in the long-run.

The long-run input demand function (14) implies that the sum of the long-run wage elasticities for any input demand function should equal $-1/\xi$. This requirement can be confirmed by observing the structure of the matrix W_2. The third and fourth columns of Table 5 compare the sum of the long-run wage elasticities for each equation with the implied constraints. As with the short-run comparison, all of the long-run sums are less than they should be given the constraint. Also, the difference between the sum and the constraint increases between the short- and long-run.

Whereas the correspondence between the estimates of the long- and short-run help argue for the model and the estimated parameters as a group, the difference between the sum of the wage elasticities and their corresponding constraint is large enough, in the absence of further information, to question the validity of the model. There is one consideration which implies that the sum of the estimated wage elasticities should be greater in magnitude than $-1/\xi$; one factor input--capital--has been omitted. It seems reasonable to presume that each of the labor inputs would be substitutable for capital. This would imply that for each labor input the price of capital would enter with an estimated non-negative elasticity. Since a non-negative elasticity would drive the sum of the input price (wage) elasticities to a lower magnitude, the long- and short-run constraints for the elasticities would be closer to fulfillment. Since the differences between the sum of the estimated wage elasticities and the constraint are of a reasonable magnitude to be interpreted as the cross-price elasticity of capital for each labor input demand, the differences displayed on Tables 5 and 6 might be interpreted as a first approximation of the short-and long-run price elasticities of capital for each labor input.

The possibility that the wage constraint would be fulfilled with a model that included, explicitly, a capital input demand function reinforces the justification for not using a constrained estimation method since the result would have been to bias the estimates of each individual wage parameter. For example, if we had constrained the estimated wage parameters in the police input demand function such that the implied constraint for the sum of the wage elasticities would be fulfilled, we would be imposing biases in the estimates of the wage parameters in order to fulfill the constraint when, in fact, the unconstrained estimates of the individual parameters were more accurate given the absence of observations on capital.

E. Implications of the Complete Model

Previous sections have dealt separately with two components of the model. This section combines these components and derives long-term implications for each of the endogenous variables. The original form of the model given by (18) can be solved for total criminal justice expenditures, total crimes, total arrests, total imprisonments, and the level of each labor input. This solution requires messy algebra that will not be included. Solving for the long-run changes in the endogenous variables requires inverting a nine-by-nine matrix that is an augmentation of the (I-B) matrix, which was inverted to analyze the long-run input demand functions alone. The results of the algebra and inversion are displayed in Table A-7. Each column gives a dependent variable and each row an independent variable. Thus, reading down a column will indicate the percentage change in the dependent variable due to a 1 percent change in the particular independent variable.

For total criminal justice expenditures, all of the exogenous variables, with the exception of the defense wage rate, impact positively upon total criminal justice expenditures. All of these positive impacts seem of reasonable

TABLE A-7

LONG-RUN PERCENTAGE CHANGES IN CRIMINAL JUSTICE EXPENDITURES, CRIME, ARRESTS, IMPRISONMENTS, AND DEMAND FOR EMPLOYEES DUE TO ONE PERCENT CHANGES IN EXOGENOUS VARIABLES

Exogenous Variable	Criminal Justice Expenditures	Total Crimes	Arrests	Imprisonments	Employment				
					Law Enforcement	Judicial	Prosecution	Defense	Corrections
Population	.066	1.164	.814	.492	.069	.064	.061	.068	.063
Total state and local expenditures	.954	-.194	.206	.606	.998	.936	.885	.991	.983
Criminal justice grants from federal government	.032	-.007	.007	.020	.034	.032	.030	.034	.033
Per capita personal income	.372	.932	.765	.621	.390	.366	.346	.387	.384
Number in urban areas	.315	.787	.646	.525	.329	.309	.292	.327	.324
Number age 15-24 years old	.575	1.438	1.180	.959	.601	.564	.533	.597	.592
Number unemployed	.134	.336	-.379	-.144	.141	.132	.125	.140	.139
Wages[1]									
Law Enforcement	.018	.046	-.335	-.021	-1.083	1.010	1.504	-1.001	-.083
Judicial	.013	.032	-.007	-.111	-.085	-1.539	-.760	-2.188	-.419
Prosecution	.018	.045	.105	-.204	.220	-.429	-1.353	-.000	-.295
Defense	.001	-.003	-.001	.012	.003	.141	.247	-.047	-.148
Corrections	.036	.091	.012	-.332		-.322	-.733	2.517	-.164
Long-term annual growth rate (%)	62%	1.54	2.01	6.41	2,85	3.10	2.77	19.62	-12.65

[1] Note that these long-run wage elasticities are closer to fulfilling the constraint $\beta \cdot W_2 \cdot 1 = -1/\xi$.

Sources: Equation (25) and Table 1.

magnitude, and, in addition, there is a small upward trend in total criminal justice expenditures of less than 1 percent per year. The negative impact of defense wages on total criminal justice expenditures is obtained through the imprisonment equation since inprisonments are lower with more defenders. Thus, the model is unconstrained in the sense that an increase in defenders' wages would presumably be met with a decrease in defense employment, and hence an increase in imprisonments, if public funding decisions on defense employment were not inhibited by judicial rulings.

The behavior of total crime is similar, in the long-run, to the behavior of total criminal justice expenditures with the exception of increases in total state and local expenditures and federal grants to state and local governments for criminal justice services. Both of these variables decrease total crime through their positive impact on total criminal justice expenditures and employment in each of the sectors. One of the interesting implications of the crime function is that, after controlling for a large number of exogenous and endogenous variables, crime has a secular upward trend of only 1.5 percent per year. This seems somewhat contrary to the popular account of crime growing uncontrollably.

There are no surprises in the behavior of arrests. There seems to be some slight upward trend in the number of arrests, which might indicate some marginal increase in the productivity of the criminal justice system. The change in arrests with changes in wage rates, for sectors other than police, is interesting. Arrests tend to decrease with the increases in judicial or defense wages while they increase with increases in prosecution and corrections wages. This somewhat perplexing sign pattern is a direct result of the interaction variables dictated by the disequilibrium input demand functions.

The imprisonment function behaves much the same as arrests, with a major exception that there is a significant downward trend in imprisonments. The model results imply that imprisonments have been decreasing at a long-run annual rate of 6.4 percent. There are no significant surprises for the input demand functions.

An Aside on Benefits and Costs. The first four equations of the system can be used to determine the effect of changes in employment on criminal justice expenditures, total crimes, arrests, and imprisonments. Table A-8 gives these percentage changes due to 10 percent changes in each employment category. The results are not surprising given the previous discussion and the assumptions of the model. Law enforcement, prosecution and corrections personnel are beneficial in terms of reducing crime and expenditures; judicial personnel are neutral; and defense personnel "counter-productive" in terms of this model, which only considers two of the components of criminal justice services.

Within this model it is possible to calculate the perceived social cost of crime as the change in criminal justice expenditures due to a unit increase in crime — in other words, the additional amount society is willing to pay in response to a crime increase of one. The average perceived social cost is $640.[16] The average value of an additional law enforcement person is $570 through a reduction in crime by increased arrests.[17] Similar calculations for other types of personnel are: prosecution, $1,890; defense, minus $9,150; and correction,s $2,390. These estimates are proably biased downward by not including all of the components of criminal justice services.

TABLE A-8

UNCONSTRAINED PERCENT CHANGES IN CRIMINAL JUSTICE EXPENDITURES, CRIME, ARRESTS, AND IMPRISONMENTS DUE TO TEN PERCENT CHANGES IN EMPLOYMENT

Employment	Criminal Justice Expenditures	Total Crimes	Arrests	Imprisonments
Law Enforcement	-.302	-.755	2.812	1.493
Judicial	0	0	0	0
Prosecution	-.079	-.197	-.150	.772
Defense	.069	..172	.131	-.673
Corrections	.445	-1.114	-.845	4.359

Source: Equation (25) and Table 1.

F. PROCEDURES FOR PROJECTIONS OF THE OCCUPATIONAL DISTRIBUTION

Once sector employment projections are generated by the model, two matrices must be developed to disaggregate these section figures to an occupational level--

The $\overline{A}$ matrix with elements $a_{s,t}$, which represent the proportion of total sector employment in each agency, and

the $\overline{O}$ matrix with elements $O_{a,t}$ which represent the percent of agency employment in each occupation in year t.

Future values of the elements of each of these matrices depend on the growth in employment for that occupation relative to employment growth in the agency and the sector. The equation for estimating the elements of the $\overline{A}$ matrix is:

$$a_{s,t} = \frac{G_a}{G_b} \cdot a_{s,74}$$

where G_a, S_x = the projected growth in employment in agency type, a, and sector, s, over time period t.

Since G_s, the growth in sector employment, is known from the model, the value of the ratio G_a/G_s can be estimated based on available evidence on the recent patterns of growth in each of the agencies in relationship to total sector employment.

Similarly, the value of the elements of the $\overline{O}$ matrix can be estimated, having estimated the growth in agency employment using the relationship:

$$O_{a,t} = G_o/G_a \cdot O_{a,74}$$

where G_o, G_a = the projected growth in occupation, O, and projected growth in employment in agency a, over time period t.

Therefore, the total employment in a particular occupation, $E_{o,t}$, is represented by:

$$E_{o,t} = \sum_{S=1}^{5} \sum_{a=1}^{n} E_{s,t} \cdot A_{a,s,t} \cdot O_{o,a,t}$$

where $E_{s,t,}$ is the estimated employment sectors, s in years, t.

Table A-9 shows the value of the $\overline{A}$ matrix for each sector. The values of the $\overline{O}$ matrix are found in the User's Guide, Appendix B.

Table A-9

MATRIX $\overline{A}$: CURRENT AND PROJECTED AGENCY DISTRIBUTION OF CRIMINAL JUSTICE EMPLOYMENT

	Police			Judicial			Prosecution			Defense			Corrections		
	1974	1980	1985	1974	1980	1985	1974	1980	1975	1974	1980	1985	1974	1980	1985
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Agency Type 1	16.7	17.7	18.8	1.9	1.8	1.8	26.0	29.1	30.8	52.2	46.8	45.5	32.5	32.4	32.1
Agency Type 2	67.9	65.4	63.2	1.8	2.5	3.0	74.0	70.9	69.2	47.8	53.2	54.5	19.7	19.8	19.4
Agency Type 3	15.4	16.8	18.0	36.7	40.1	42.4	-	-	-	-	-	-	21.2	16.9	14.8
Agency Type 4	-	-	-	43.6	43.0	41.0	-	-	-	-	-	-	22.2	27.0	29.6
Agency Type 5	-	-	-	-	-	-	-	-	-	-	-	-	4.4	3.9	4.1

TABLE A-10

EXPLANATION OF AGENCY TYPES

	Police	Judicial	Prosecution	Defense	Corrections
Agency Type 1	State Police	Court of Last Resort	State Prosecutor	Public Agency	State Adult Institutions
Agency Type 2	City Police	Intermediate Appellate Court	Local Prosecutor	Contracted Service	Local Adult Institutions
Agency Type 3	County Police	General Jurisdiction Court	---	---	Juvenile Institutions
Agency Type 4	---	Limited Jurisdiction Court	---	---	Probation/Parole
Agency Type 5	---	Miscellaneous Judicial Activities	---	---	Miscellaneous Corrections Activities

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APPENDIX A

NOTES AND REFERENCES

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4. Becker, G.S., "Crime and Punishment: An Economic Approach," Journal of Political Economy, March/April 1968, pp. 169-217.

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8. Throughout the remainder of this paper all variables will be measured in their natural logarithms unless specified otherwise.

9. This adjustment mechanism is the same one used for manufacturing by Nadiri, M. I. and Rosen, S., A Disequilibrium Model of Demand for Factors of Production, New York, N.Y.: Columbia University Press, 1973.

10. For example, see Michael J. Hendelang, "The Uniform Crime Reports Revisited," Journal of Criminal Justice, (Spring 1974) pp. 1-47; and Marvin E. Wolfgang, "Uniform Crime Reports: A Critical Appraisal," University of Pennsylvania Law Review (April 1963).

11. An interesting example of results of pooling cross-section and time series data as well as an examination of the properties of the estimates is given in Palestra, P. and Nerlove, M., "Pooling Cross-Section and Time Series Data and the Estimation of a Dynamic Model: The Demand for Natural Gas," Econometrica (July 1966), pp. 585-612.

12. Zellner, A., "An Efficient Method of Estimating Seemingly Unrelated Regressions and Tests for a Regression Bias," Journal of the American Statistical Association (June 1962).

13. Fisher, Brookings Papers 71.

APPENDIX A
NOTES AND REFERENCES
(continued)

14. The R^2 and F-statistic is the adjusted one measured for the ordinary least squares estimates.

15. Gramlich and Galper, op. cit., p. 44.

16. (Average criminal justice expenditures) ÷ (Average number of crimes) · (.399).

17. (Average number of crimes) ÷ (Average law enforcement employment) · (.0755) · ($640).

APPENDIX B

NATIONAL MANPOWER SURVEY PROJECTIONS MODEL
USERS GUIDE

The National Manpower Survey (NMS) manpower projections model, in application, consists of a relatively simple set of relationships and procedures for producing projections of employment by occupation and agency for the state and local government criminal justice system. Section A describes the general structure of the NMS model. Each subsection of Section B covers specific components of the model.

A. THE NMS MANPOWER PROJECTIONS MODEL

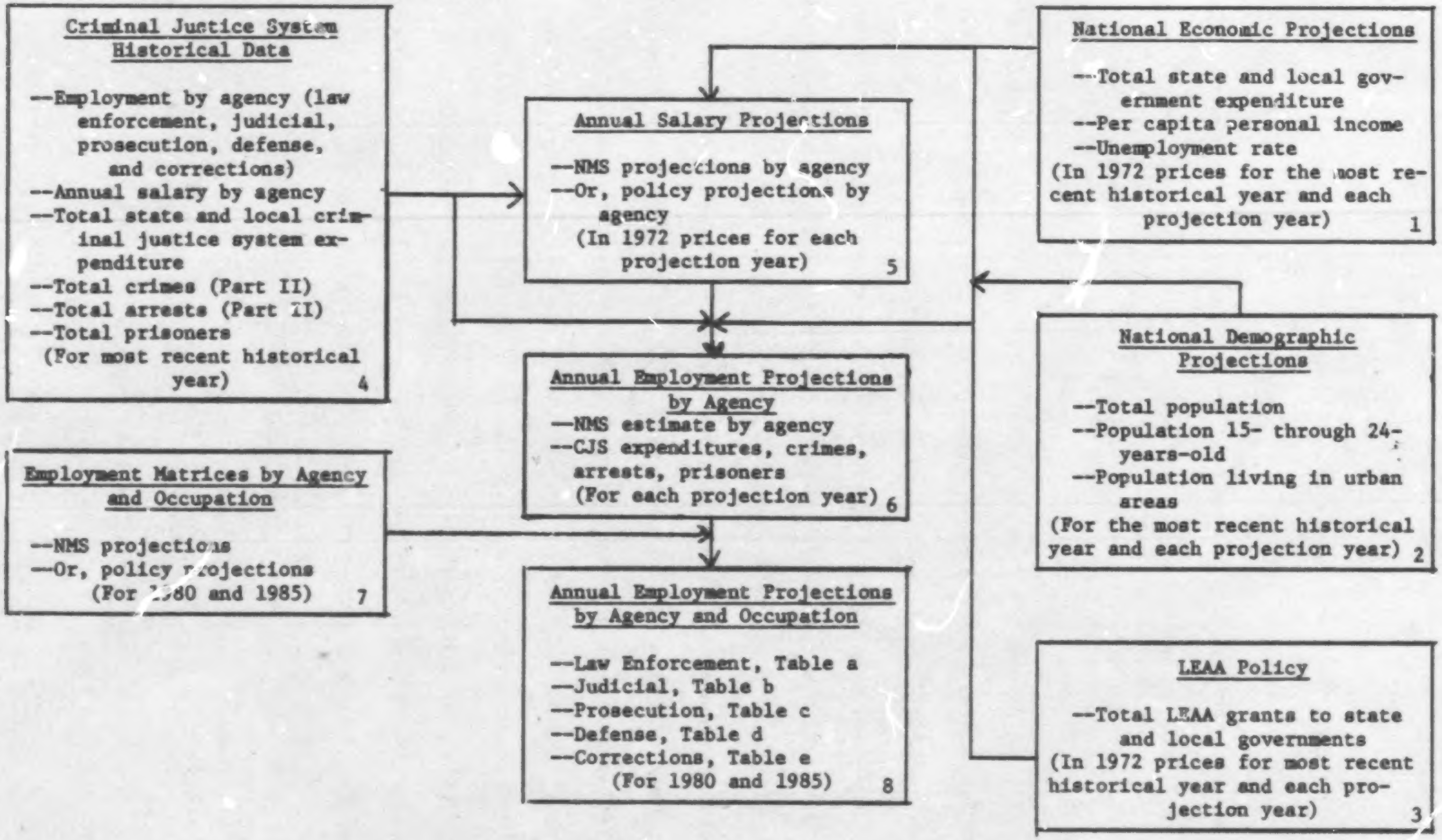
The chart on the following page depicts the interactions between each of the major components of the NMS manpower projections model. The numbers in the lower right-hand corner of each box will be used for quick reference to each component.

The right-hand side of the chart (stages 1, 2 and 3) lists the major national and economic and demographic projections necessary to "drive" the NMS model. In addition to these projections, it is also necessary to stipulate Law Enforcement Assistance Administration grant awards to state and local governments.

The criminal justice system's specific historical data necessary to begin a projections run are listed in stage 4. Each of these items corresponds to a major output of the projections model. Given these input data, the projections model begins with annual salary projections in stage 5. These salary projections combine with the other input data to permit the development of annual employment projections by major agency (law enforcement, judicial, prosecution, defense and corrections), as given in 6.

These employment projections are then used as inputs to develop 1980 and 1985 employment projections by agency and occupation. The occupational distribution matrices are developed in stage 7. These are input to the projections model to produce the occupation-specific projections given in stage 8 and in Tables 3-7.

NATIONAL MANPOWER SURVEY MANPOWER PROJECTIONS MODEL



Criminal Justice System Historical Data

- --Employment by agency (law enforcement, judicial, prosecution, defense, and corrections)
- --Annual salary by agency
- --Total state and local criminal justice system expenditure
- --Total crimes (Part II)
- --Total arrests (Part II)
- --Total prisoners

(For most recent historical year) 4

Employment Matrices by Agency and Occupation

- --NMS projections
- --Or, policy projections

(For 1980 and 1985) 7

Annual Salary Projections

- --NMS projections by agency
- --Or, policy projections by agency

(In 1972 prices for each projection year) 5

Annual Employment Projections by Agency

- --NMS estimate by agency
- --CJS expenditures, crimes, arrests, prisoners

(For each projection year) 6

Annual Employment Projections by Agency and Occupation

- --Law Enforcement, Table a
- --Judicial, Table b
- --Prosecution, Table c
- --Defense, Table d
- --Corrections, Table e

(For 1980 and 1985) 8

National Economic Projections

- --Total state and local government expenditure
- --Per capita personal income
- --Unemployment rate

(In 1972 prices for the most recent historical year and each projection year) 1

National Demographic Projections

- --Total population
- --Population 15- through 24-years-old
- --Population living in urban areas

(For the most recent historical year and each projection year) 2

LEAA Policy

- --Total LEAA grants to state and local governments

(In 1972 prices for most recent historical year and each projection year) 3

B. OPERATION OF THE NMS MODEL

1, 2 and 3. National Projections

The first three components of the model include the major national economic and demographic projections as well as the major policy assumptions necessary to develop projections of criminal justice employment by agency. Table 1 lists each of the major national economic and demographic projections required by the model for each projection year and the most recent historical year, 1974.

With two exceptions, the national projections are those prepared by the National Planning Association in March 1976 and published as part of its National Economic Projections Series (NEPS Report No. 76-N-1).

The two exceptions are (1) population within SMSA's and (2) total LEAA grants to state and local governments, which were developed by the NMS staff. The projection of population living in SMSA's decreased as a share of total population reflecting the recent (1970-75) trend in the distribution of population within the United States. The projection for LEAA grants to state and local governments was made on the assumption that the grants for criminal justice would increase at the same rate as total grants in aid to state and local governments.

Any of these projections and assumptions can be modified by altering the file EXG.DAT. It is only necessary to replace those values with alternative assumptions before running the major projections program.

4. Criminal Justice System Historical Data

This component contains most of the historical data for employment, salaries, criminal justice system expenditures, crimes, arrests and imprisonments available from published sources. Table 2 gives these historical data for 1974. File AD74.DAT, presently contains these data for 1974. When the 1975 data are available, they should be substituted into AD74.DAT. In addition, it will be necessary

TABLE 1

VALUES OF EXOGENOUS VARIABLES FOR 1974 TO 1985

Year	Population	Total State and Local Expenditures	Federal Grants	Per Capita Personal Income	Unemployment Rate	Percent 15-24-Years-Old	Percent Urban
1974	211894000	167333039000	937620446	4570.8938	5.6000	18.6720	72.8099
1975	213631000	174783979000	971088797	4581.6866	8.5310	18.8497	72.7354
1976	215259001	180014800000	990218423	4773.4829	7.4230	18.9965	72.5922
1977	216999900	184979141000	1012904640	4986.4467	6.4380	19.0368	72.4149
1978	218869301	189113420000	1033915490	5086.4908	6.4150	18.9960	72.2993
1979	220862901	195363021000	1046977470	5072.4558	7.7150	18.8745	72.1477
1980	222980799	203793099000	1059716950	5145.2809	6.9650	18.6369	71.9613
1981	2215183100	213854369000	1090078650	5252.0304	6.4260	18.2776	71.8542
1982	227433400	224614590000	1118965820	5368.0038	5.8370	17.8160	71.6388
1983	229716299	235333428000	1144111310	5495.8689	5.2780	17.3202	71.5204
1984	232014401	244209500000	kk585k8899	5615.9345	5.0050	16.8575	71.4046
1985	234313000	258142088000	1204241920	5629.1869	5.0410	16.4461	71.2410

File: EXG.DAT Format: Free

Note: In addition to the items listed in TAble 1, the last 10 elements of EXG.DAT for 1974 are (1) the 1974 annual salary for each category and (2) the (lagged) 1973 values for law enforcement, judicial, prosecution, defense, and corrections employment. The last 10 elements for 1975 are (1) the 1975 annual salary for each category and (2) the lagged 1974 employment values. The eighth and ninth items are always zero. From 1976 onward, the last 10 values are 2 zeros see the printout of EXG.DAT at the end of Section 6.

TABLE 2

VALUES OF ENDOGENOUS VARIABLES FOR 1974

Year	Criminal Justice Expenditures	Crimes	Arrests	Imprisonments	Law Enforcement	Judicial	Prosecution	Defense	Corrections
1974	10,927,104,000	10,192,000	2,164,100	190,000	539,409	118,395	45,374	10,895	203,230

File: AD74.DAT Format: Free

to delete the first row of EXG.DAT and update the second row in order to begin the projections with the actual experience for 1975. By simply modifying and/or updating the data in stages 1, 2, 3 and 4 it is possible to obtain new and revised runs of the NMS manpower projections model.

In order to modify the projections in states 1, 2 and 3, it is only necessary to alter those variables to be tested for the appropriate year. In order to update the projections, modifications are necessary to the input data file as for stages 1, 2, 3 and 4. Presently, the historical data for the criminal justice system relate to 1974. When the 1975 data become available, these data should replace those presently in EXG.DAT. In order to make the projections of the exogenous national economic and demographic projections consistent with the revised criminal justice historical data, it is necessary to delete the first row of the file EXG.DAT. Thus, the first row of the file EXG.DAT will contain values for 1975.[1] In order to extend the projections past 1965 it is necessary to add values for 1986, etc.

5. Annual Salary Projections

At this point the national economic and demographic projections are taken into stage 5 and NMS projections of salaries by agency are developed by stipulating an average annual growth rate for real wages. The user can either select the NMS projection or he may specify a rate of growth, in real wages, that he expects over the next ten years.

6. Employment Projections by Agency

At stage 6, the annual employment projections by major agency (law enforcement, judicial prosecution, defense, and corrections) are prepared, as well as projections of total state and local criminal justice expenditures, total crimes, total arrests, and total prisoners. As the user can see from the program

---

[1] Lagged (1975) values of employment by category will need to be inserted in the 1976 record.

at the end of this section, solution for these nine values is obtained by cycling through the nine equation model discussed in the technical appendix until the differences between the values of the iterations are small. In order to modify this segment of the program, it is necessary to modify the parameters given in MAT.DAT (for the employment equations) and LOEF.DAT (for the other four equations). The second contains the parameters of the equations estimated for total criminal justice expenditures, crime rate, arrests, and imprisonments. If new estimates of these four equations are obtained without changing the equation form, these parameters can be modified and the model run immediately. Also, the input demand functions for employment by agency can be modified by changing any one of the five rows of the second data statement. Each row corresponds to an agency--law enforcement, judicial, prosecution, defense and corrections--with the associated parameters for the particular input demand function.

7. Employment Matrices by Agency and Occupation

Tables 3-7 present NMS projections of the distribution of employment by occupation for 1980 and 1985 as well as the historical data for 1974. These data files (the names are associated with each segment of the distribution) can be modified by the user prior to running the employment by agency and occupation program. These particular distributions were developed by NMS from its analyses and data sources.

8. Annual Employment Projections by Agency and Occupation

At this point, projections are obtained by multiplying the matrices given in Tables 3-7 times the total employment by agency developed in stage 6. For example, multiplication of the 1980 column of Table 3 (law enforcement) by the 1980 projection of total law enforcement employment gives law enforcement employment by occupation for 1980, similarly, for the appropriate columns of

TABLE 3

OCCUPATIONAL DISTRIBUTION OF POLICE EMPLOYMENT 1974, 1980, 1985

Occupations	1974	1980	1985
Management			
sworn	7.3%	7.19%	6.96%
nonsworn	0	0	0
Supervisor			
sworn	4.39	4.35	4.29
nonsworn	0	0	0
Patrol			
sworn	49.20	48.22	47.06
nonsworn	0	0	0
Investigation			
sworn	8.69	8.54	8.38
nonsworn	0	0	0
School crossing guards, meter checkers, trainees			
sworn	1.56	1.47	1.43
nonsworn	5.12	4.84	4.75
Dispatchers and communications			
sworn	0.94	0.93	0.88
nonsworn	3.80	4.29	4.60
Other direct support			
sworn	2.74	2.72	2.65
nonsworn	1.97	2.24	2.56
Professional, technical, administrative			
sworn	2.19	2.18	2.13
nonsworn	1.13	1.30	1.41
Clerical, crafts and service workers			
sworn	1.26	1.19	1.16
nonsworn	9.53	10.43	11.50
Totals	100.00	100.00	100.00

Sources: NPA Projections. (See Text).

TABLE 4a

MATRIX O_2: CURRENT AND PROJECTED DISTRIBUTION OF JUDICIAL AND SUPPORT PERSONNEL IN GENERAL JURISDICTION COURTS

	Full-Time Equivalent Employment		
	1974	1980	1985
Total Employment	100.0%	100.0%	100.0%
Judges	12.4	9.3	8.0
Other personnel exercising judicial authority	9.6	7.2	6.3
Total Support Personnel	77.9	83.4	85.7
Clerks of court, deputy clerk	25.7	27.5	28.2
Law clerks	2.5	2.7	2.8
Bailiffs	12.6	13.5	13.9
Staff attorney	1.6	1.8	1.8
Court reporters	10.1	10.8	11.1
Presentence investigator	1.6	1.8	1.8
Professional/technical employees	2.7	3.0	3.1
Clerical/secretarial	15.9	17.1	17.4
Other	5.1	5.1	5.4

Source: NPA projections. (See Text).

TABLE 4b (Continued)

MATRIX O_2: CURRENT AND PROJECTED DISTRIBUTION OF PERSONNEL IN APPELLATE COURTS

	1974	1980	1985
Total	100.0%	100.0%	100.0%
Judges	17.3	12.8	10.3
Support	82.7	87.2	89.7
Clerks and deputy clerks of court	11.4	12.4	12.9
Law clerks	22.0	23.3	24.1
Staff attorney	6.4	7.3	7.6
Professional and technical personnel	4.3	3.9	3.4
Clerical	32.7	34.0	35.0
Other	5.9	6.4	6.6

Source: NPA Projections. (See Text).

TABLE 5

OCCUPATIONAL DISTRIBUTION OF PROSECUTION EMPLOYMENT

Occupation	1974	1980	1985
Prosecutors	42.5	46.4	48.0
Investigators	15.6	14.7	14.2
Paralegals	2.4	2.3	2.2
Clerical	31.3	29.4	28.6
Other	8.2	7.2	7.0
Totals	100.0	100.0	100.0

Source: NPA Projections. (See Text).

TABLE 6

OCCUPATIONAL DISTRIBUTION OF INDIGENT DEFENSE EMPLOYMENT

Occupation	1974	1980	1985
Defenders	28.3	25.4	26.3
Investigators	6.7	6.0	6.2
Support (on public payrolls)	17.2	15.4	15.8
Contracted employees	47.8	53.2	51.7
Total	100.0	100.0	100.0

Source: NPA Projections. (See Text).

TABLE 7

AGENCY AND OCCUPATIONAL DISTRIBUTIONS OF CORRECTIONS EMPLOYMENT

Occupation	Agency														
	Adult state Corrections			Adult local Corrections			Juvenile Corrections			Probation/ Parole			Other		
	1974	1980	1985	1974	1980	1985	1974	1980	1985	1974	1980	1985	1974	1980	1985
Percent of Total	32.5	32.4	32.1	19.7	19.8	19.4	21.2	16.9	15.1	22.7	27.0	29.6	3.9	3.9	3.8
Administration/ management	2.0	2.1	2.1	--	--	--	11.2	11.9	12.6	13.0	13.1	13.1	---	---	---
Custodial	63.0	62.8	63.4	73.2	73.2	73.2	41.4	41.2	40.7	--	--	--	---	---	---
Treatment specialist	7.7	9.8	11.3	3.1	3.1	3.1	30.3	30.1	30.2	--	--	--	---	---	---
Medical personnel	2.6	3.2	3.8	4.1	4.1	4.1	--	--	--	--	--	--	---	---	---
Probation/parole officers	--	--	--	--	--	--	--	--	--	48.9	39.7	35.6	---	---	---
Case aides	--	--	--	--	--	--	--	--	--	8.7	10.8	11.7	---	---	---
Clerical, maintenance and other workers	24.7	22.1	19.4	19.6	19.6	19.6	17.6	16.8	16.5	29.4	36.4	39.6	100.0	100.0	100.0
Totals	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: NPA Projections. (See Text).

Table 4 for judicial, Table 5 for prosecution, and Table 6 for defense. A two-step procedure is necessary for corrections. First the appropriate "percent of total" from the first line of Table 7 should be multiplied by corrections employment to obtain employment by type of corrections agency (adult state, adult local, juvenile, probation/parole and other). Next the total for each type of corrections agency is multiplied by the appropriate column to obtain the occupational projections.

C. ADAPTATION FOR STATE USE

The national model can be adapted for state use by altering the values in the input file EXG.DAT to reflect state values of the exogenous variables--population, state and local government expenditures, federal grants for criminal justice activities, per capita personal income, unemployment rate, youth 15 to 24, urbanization and wage rates for each sector--for the base year and each year to be projected. The file AD74.DAT must contain values for the endogenous variables for the base year. Assuming that the parameters of the national model are adequate reflections of the relationships which exist within a state, the computer program and the parameter file, LOEF.DAT and MAT.DAT can be used unaltered to generate state projections. However, any state having trend data available on the relevant variables, and the needed technical expertise, is encouraged to re-estimate the equations using the techniques detailed in the technical appendix to derive parameter values particular to that state. The values for the parameters for the first four equations of the model should be substituted in the LOEF.-DAT file in the order indicated in Appendix A. The values for the parameters of the employment equations should be substituted for the national values in MAT.DAT. The program can be used unaltered to generate projections once these alterations are completed.

D. THE PROJECTIONS PROGRAM

The projections program, PROJ.F4, is a FORTRAN program which can be run interactively. The program uses 4 input files, EXG.DAT, AD74.DAT, LOEF.DAT, and MAT.DAT, and generates one output file, PROJ.DAT, containing projections of criminal justice expenditures, crimes, arrests, imprisonments, and employment for each year of the projection period. The program asks for the base year and the number of years to be projected, and allows for the user to specify the growth rate for wages if projected wages are not provided in EXG.DAT.

PROJECTIONS PROGRAM

```
TY PROJ.F4
C            PROJECT CJ EXP,CRIME,ARRESTS,PRISONERS,AND
C            EMPLOYMENT BY AGENCY
             DIMENSION V(9,15)
             DOUBLE PRECISION EN(9),EX(20),CEN(20),CEX(20),A(9,20),
        +    Y(5,8),EX1(20),EN1(20),E(5),W(5),H(9),D,PCT,RT(5),EXT(20)
        +    ,CR,ARR,PRIR,URB,PIN,Y1524,UNM,EXP,GRANT,R,RT1,RT2,RT3
             CALL IFILE(15,'NAME')
             READ(15,1555)((V(I,J),J=1,15),I=1,9)
  1555       FORMAT(15A1)
             CALL IFILE(10,'LOEF')
             CALL IFILE(11,'MAT')
             CALL IFILE(12,'EXG')
             CALL IFILE(13,'AD74')
             CALL OFILE(14,'PROJ')
             READ(11,1)((A(I,J),J=1,12),I=5,9)
  1          FORMAT(12D)
             READ(10,2)((Y(I,J),J=1,8),I=1,4)
  2          FORMAT(8D)
             DO 100 I=1,4
             DO 100 J=1,8
  100        A(I,J)=Y(I,J)
             DO 101 I=5,9
  101        A(I,13)=Y(5,I-4)
C            A(9,20)=CJS--C,CR/POP,EXP,GRANT
C                      CR/POP--C,URB,PIN,Y1524,UNM,AR/CR,PRI/AR,SOUTH
C                      AR--C,PL,URB,CR,SOUTH
C                      PRI--C,PR,DF,COR,ARR,SOUTH
C                      PL-COR--PL1-COR1,WPL-WCOR,CJS,TIME,SOUTH
             DO 67 I=5,9
  67         A(I,12)=0.0D00
             EX1(1)=0.1D01
             EX(1)=0.1D01
             TYPE 83
  83         FORMAT(1X,'TYPE LAST HISTORICAL YEAR 19XX'/)
             ACCEPT 84,IYS
  84         FORMAT(I4)
             IYP=IYS-1900
             READ(12,3)(EX1(I),I=2,20)
  3          FORMAT(19D)
C            EX=C,POP,EXP,GRANT,PIN,UNM,Y1524,UNM,SOUTH,TIME
C            WPL-WCOR,PL1-COR1
             READ(13,4)(EN1(J),J=1,9)
  4          FORMAT(9D)
C            EN=CJS,CR,AR,PRI,PL-COR
             TYPE 5
  5          FORMAT(1X,'NUMBER OF YEARS TO PROJECT?'/)
             ACCEPT 6,IE
             TYPE 111
  111        FORMAT(1X,'DO YOU WANT TO CHANGE THE WAGE PROJECTION?'/)
             ACCEPT 112,AW
  112        FORMAT(A1)
             IF(AW.NE.'Y')GO TO 113
             TYPE 114
  114        FORMAT(1X,'GROWTH RATE TO 1980;ONE SPACE;GROWTH RATE TO 1985'/)
             ACCEPT 3,RT1,RT2
  113        CONTINUE
  6          FORMAT(1I)
```

```
              DO 200 IY=1,IE
              IYP=IYP+1
              READ(12,3)(EX(I),I=2,20)
              DO 502 J=1,5
              IF(IY.GT.1)GO TO 502
              E(J)=EX(J+15)/EX1(J+15)-.1D01
              W(J)=EX(J+10)/EX1(J+10)-.1D01
              IF(AW.EQ.'Y'.AND.IYP.LE.80)W(J)=RT1
    502       IF(AW.EQ.'Y'.AND.IYP.GT.80)W(J)=RT2
              DO 410 I=1,9
    410       EN(I)=0.0D00
    C         CRIME RATE EQUATION
              URB=EX(8)/EX1(8) -.1D01
              PIN=EX(5)/EX1(5) -.1D01
              Y1524=EX(7)/EX1(7) -.1D01
              UNM = EX(6)/EX1(6) -.1D01
    C         CJ EXP EQUATION
              EXP = EX(3)/EX1(3) -.1D01
              GRANT=EX(4)/EX1(4) -.1D01
              ARR=0.0D00
              PRIR=0.0D00
    C         ENTER ITERATION LOOP
              IT=0
    300       IT=IT+1
              DO 310 I=1,9
    310       H(I)=EN(I)
              IF(IT.EQ.1)GO TO 707
              ARR=EN(3)/(EN(2)*EX(2)/.1D04)
              R=EN1(3)/EN1(2)
              ARR=ARR/R -.1D01
              PRIR=EN(4)/EN(3)
              R=EN1(4)/EN1(3)
              PRIR=PRIR/R-.1D01
    707       CONTINUE
              CEN(2)=URB*A(2,5)+PIN*A(2,2)+Y1524*A(2,4)+UNM*A(2,3)
            + +ARR*A(2,6)+PRIR*A(2,7)
              EN(2)=(.1D01+CEN(2))*((EN1(2)/EX1(2))*.1D04)
              CEN(1)=CEN(2)*A(1,2)+EXP*A(1,3)+GRANT*A(1,4)
              EN(1)=(.1D01+CEN(1))*(EN1(1))
              DO 301 I=5,9
              CEN(I)=0.0D00
              DO 303 J=1,5
              CEN(I)=CEN(I)+A(I,J)*E(J)
    303       CEN(I)=CEN(I)+A(I,J+5)*W(J)
              CEN(I)=CEN(I)+A(I,11)*CEN(1)+A(I,12)
    301       EN(I)=(.1D01+CEN(I))*EN1(I)
              CR=EN(2)*(EX(2)/.1D04)
              CR=CR/EN1(2)-.1D01
              CEN(3)=A(3,2)*CEN(5)+URB*A(3,3)+A(3,4)*CR
              EN(3)=(.1D01+CEN(3))*EN1(3)
              CEN(4)=A(4,2)*CEN(7)+A(4,3)*CEN(8)+A(4,4)*CEN(9)+A(4,5)*CEN(3)
              EN(4)=(.1D01+CEN(4))*EN1(4)
              D=EN(1)-H(1)
              D=DABS(D)
              IF(IT.GE.25)GO TO 414
              IF(D.GT..1D03)GO TO 300
```

PROJECTIONS PROGRAM
(continued)

```
414      TYPE 91,IYP
         WRITE(14,91)IYP
91       FORMAT(1X/1X,'PROJECTIONS FOR 19',I2/)
12       FORMAT(1X,15A1,5X,D16.9,5X,D16.9)
         DO 320 I=1,9
         R=EN(I)
         IF(I.EQ.2)R=(EN(I)*EX(2))/.1D04
         PCT=R/EN1(I)
         IF(I.GE.5)E(I-4)=PCT-.1D01
         EN1(I)=R
320      WRITE(14,12)(V(I,K2),K2=1,15),EN(I),PCT
         DO 321 J=1,15
321      EX1(J)=EX(J)
         PCT=0.0D00
200      CONTINUE
         STOP
         END
```

INPUT FILES

MAT.DAT includes the parameters for the input demand equations: law enforcment, judicial, prosecution, defense and corrections. The independent variables are:

PL1, JD1, PR1, DF1, COR1, WPL, WJD, WPR, WDF, WCOR, CJS, SOUTH

```
 TY MAT.DAT
00100   .56730 -.19470D-01 -.795D-02 -.78509D-02 -.96893D-01 -.46368 -.13801 .37045D-01 -.14423D-01 -.94129D-01 .58732
 -.11915D-02
00200   -.46807 .59483 .19847D-01 .13405D-01 -.16631 -.14696 -.70178 -.11122 .41367D-01 -.28426 1.0265 -.46652D-02
00300   -.30638 -.22356D-01 .83079 -.29403D-01 -.24574D-01 -.96335D-01 -.27066 -.18836 .17966D-01 -.12712 .55549 .1333
8D-01
00400   -.64692 .38181 .93653D-01 .36982 .66695D-01 -1.8670 -.75701 .43786 -.59817 1.6632 .80149 .13112
00500   -.2516 -.10121 -.27111D-02 .15747D-01 .74296 -.18316 -.26025 -.78423D-01 -.83886D-02 -.17625 .61371 -.29015D-0
1
```

LOEF.DAT contains the parameters of the first four equations:

$$CJS = f_1(C,CR,EXP,GRANTS)$$

$$CR = f_2(C,PIN,UNR,YOUTH,URB,ARR/CR,PRIR/ARR,SOUTH)$$

$$ARR = f_3(C,PL,URB,CR,SOUTH)$$

$$PRIR = f_4(C,PR,DF,COR,ARR,SOUTH)$$

```
 TY LOEF.DAT
00100   -5.4516 .39974 1.0314 .34863D-01
00200   -11.523  .72284 .17909 1.3201 .85552 -.28535 -.19932 .24175
00300   2.3305 .33850 -.65463 .67952 .10462
00400   -2.2449 .87876D-01 -.76702D-01 .49633 .56224 .53154
```

EXG.DAT

```
 TY EXG.DAT
00010       211894000.00000  167333039000.00000    937620446.00000          4570.89379          5.60000
        18.67198           72.80994              0.00000             0.00000           9664.58395          9769.38121
            10929.59940         10427.21150            8892.69553         111146.00200        109213.00000              40909
.00010        8809.99997        187310.00100
00020       213631000.00000  174783979000.00000    971088797.00000          4581.68659          8.53100
        18.84970           72.73543              0.00000             0.00000           9750.59874          9769.38121
            10929.59940         10427.21150            8971.84059         539408.99700        118395.00000              45374
.00010       10895.00000        203229.99900
00030       215259001.00000  180014800000.00000    990218423.00000          4773.48290          7.42300
        18.99646           72.59216              0.00000             0.00000           9837.37931          9769.38121
            10929.59940         10427.21150            9051.69003             0.00000             0.00000                  0
.00000          0.00000             0.00000
00040       216999900.00000  184979141000.00000   1012904640.00000          4986.44672          6.43800
        19.03678           72.41491              0.00000             0.00000           9924.93190          9769.38121
            10929.59940         10427.21150            9132.25003             0.00000             0.00000                  0
.00000          0.00000             0.00000
00050       218869301.00000  189113420000.00000   1033915490.00000          5086.59080          6.41500
        18.99599           72.29927              0.00000             0.00000          10013.26380          9769.38121
            10929.59940         10427.21150            9213.52707             0.00000             0.00000                  0
.00000          0.00000             0.00000
00060       220862901.00000  195363021000.00000   1046977470.00000          5072.45578          7.71500
        18.87451           72.14773              0.00000             0.00000          10102.38180          9769.38121
            10929.59940         10427.21150            9295.52749             0.00000             0.00000                  0
.00000          0.00000             0.00000
00070       222980799.00000  203793099000.00000   1059716950.00000          5145.28088          6.96500
        18.63690           71.96133              0.00000             0.00000          10294.32690          9769.38121
            10929.59940         10427.21150            9472.14261             0.00000             0.00000                  0
.00000          0.00000             0.00000
00080       225183100.00000  213854369000.00000   1090078650.00000          5252.03042          6.42600
        18.27757           71.85421              0.00000             0.00000          10489.91920          9837.76681
            11006.10650         10500.20200            9652.11317             0.00000             0.00000                  0
.00000          0.00000             0.00000
00090       227433400.00000  224614590000.00000   1118965820.00000          5368.00377          5.83700
        17.81603           71.63881              0.00000             0.00000          10689.22770          9906.63126
            11083.14930         10573.70350            9835.50332             0.00000             0.00000                  0
.00000          0.00000             0.00000
00100       229716299.00000  235333428000.00000   1144111310.00000          5495.86892          5.27800
        17.32015           71.52039              0.00000             0.00000          10892.32280          9975.97769
            11160.73130         10647.71940           10022.37780             0.00000             0.00000                  0
.00000          0.00000             0.00000
00110       232014401.00000  244209500000.00000   1169619900.00000          5615.93451          5.00500
        16.85749           71.40458              0.00000             0.00000          11099.27700         10045.80950
            11238.85640         10722.25340           10212.80300             0.00000             0.00000                  0
.00000          0.00000             0.00000
00120       234313000.00000  258142088000.00000   1204241920.00000          5629.18685          5.04100
        16.44612           71.24100              0.00000             0.00000          11310.16300         10116.13010
            11317.52840         10797.30920           10406.84620             0.00000             0.00000                  0
.00000          0.00000             0.00000
```

See Table 1.

```
 TY AD74.DAT
00200   8796430200 10192000 2164100 187982 539409 118395 45374 10895 203230
```

See Table 2.

APPENDIX C

THE PLANNING AND EXECUTION OF STATE CRIMINAL JUSTICE MANPOWER SURVEYS: A SURVEY MANUAL BASED ON THE COOPERATIVE NMS-NORTH CAROLINA PROJECT

BY
Gloria Shaw Hamilton

APPENDIX C

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ACKNOWLEDGEMENTS

Any project can be conducted only if many individuals give unstintingly of their time and efforts. In North Carolina the list of officials who gave the project their support, their constructive suggestions and their help is far too lengthy to cite here. We hope all of those individuals know how much we appreciate all they did for us throughout all phases of our work in the state.

Some individuals, whose contributions to the project were outstanding, should be mentioned. Our thanks go to Donald R. Nichols, Administrator of the State of North Carolina, Department of Natural and Economic Resources, Law and Order Section, and to Gordon Smith, Planning Director, whose active support, cooperation and encouragement were vital in bringing to a successful conclusion those parts of the project which could be completed with the available funds.

Joseph Auten, the Police Programs Chief Assistant in the Law and Order Section, was assigned as a coordinator for the Manpower Survey. He worked long and hard in performing a wide variety of tasks both efficiently and with good humor. He arranged meetings, proofread survey instruments, phoned reluctant respondents to urge completion of their questionnaires, arranged transportation and living accommodations for the consultants during our numerous trips to the state.

Cecil Hargett, Director of the Criminal Justice Training and Standards Council, gave us much valuable advice in suggesting the need for certain questions and in providing information to the consultants about the existence of already available data sources within the state information system.

Perry Powell, Director of the North Carolina Justice Academy, lent enthusiastic support to the entire project and gave needed help in suggesting question content, particularly for questions which were to be included in the Law Enforcement Executive Opinion Questionnaire.

Within the State Planning Office Alex Almasy, the Corrections Programs Chief; J. C. Rudisill, Jr., Criminal Justice Improvement Programs Chief; and Anne Bryan, Youth Programs Chief, were unfailingly helpful and cooperative.

The "North Carolina Project" cannot be called a success because it remains incomplete. Nevertheless, perhaps the completed survey of the state's law enforcement agencies will constitute a successful first step toward an on-going data-collection effort which will be comparable across all segments of the criminal justice system in North Carolina. It is our hope that the drafts of other questionnaires which were developed but not used, as well as the substance of many of the long discussions held may serve as a basis for positive action in the future as North Carolina unifies its information-collection and data maintenance systems. In addition we hope that other states wishing to conduct data-collection efforts of their own will find this brief manual of some use in guiding their planning and helping to identify problems inherent in such an undertaking.

I. INTRODUCTION

An ancillary project in connection with the National Manpower Survey was a proposed prototype data collection venture at both agency and employee levels within the criminal justice system for a single state. It was proposed to give consultating assistance to the state picked as the prototype both for the development of the instruments to be used and for the methods of collecting the data.

The State of North Carolina was chosen as the prototype state as a result of a variety of factors. Geographically, the State contains both rural and urban areas, so that it has both small and large law enforcement and correctional agencies. At the same time it does not contain any single atypical urban center such as New York City, Chicago or Los Angeles which in themselves dictate the type of data collection mechanisms needed for the states in which such centers are located. It is also located in the Eastern section of the United States and therefore was accessible to the personnel conducting the National Manpower Survey. In addition, North Carolina had previously used survey methods in collecting data from its correctional personnel in regards to salary matters, and had also conducted, through the State of North Carolina's Department of Natural and Economic Resources, Division of Community Assistance, Law and Order Section (hereafter referred to as the Criminal Justice Planning Office).

The State welcomed the offered assistance in upgrading and updating its data collections efforts, and assured the consultants of assistance and cooperation.

Early in the effort to establish the state prototype survey, however, the Law Enforcement Assistance Administration, the funding organization for the entire National Manpower Survey, made the decision not to put additional funds into the testing of this project. Although some assistance had already been given to the State it was necessary to curtail these consulting activities. Thus, any description of the procedures and methods followed in North Carolina during the 1975-76 collection period is necessarily incomplete. It is hoped that these descriptions will serve a similar purpose for users as that obtained from an examination of data from any on-going study. Model questionnaires are included in this volume. In addition there is some discussion of the parts of the survey which were not completed, but for which some planning endeavors had been made. It is hoped that these planning outlines may also offer some assistance to other states contemplating similar projects.

A. What Is a Survey?

A survey is a data-collection operation in which factual questions, or questions pertaining to the opinions and attitudes of a given population are studied. Usually when we say "survey" we are actually using an abbreviation of the term "sample survey," which means that only a small number of cases are surveyed because of limitations of time or resources. It has been found through experience that we can often make very accurate predictions from a scientifically drawn sample (one in which every person or object in the sample has an equal or, at least, known, probability of being chosen) rather than having to ask questions of everyone in the population of interest. If the sample is selected following certain statistical techniques, it can "represent" the entire population. Everyone is familiar with political polls which generally survey only a small portion of the people in the United States, or in a specified area, in order to predict the probable political attitudes and behavior of the entire population of that area.

Many people in fact tend to identify the word "survey" exclusively with public opinion polls or market research. However, surveys need not be limited to individuals or households, but can be made of any "universe" of interest such as certain governmental units, business organizations, or school districts. The phenomena studied may also vary widely among such subjects as tax rates, hiring practices, text books, court dockets, commodity price variations, or student demonstrations, as examples.

A survey also is not always a "sample survey." When factual information is needed which deals with budget amounts, numbers of people or equipment belonging to certain groups or organizations, etc., a survey of the entire universe of interest may be necessary. Surveying the entire population is called a census. Accurate counts of numbers of people or things are best acquired through a census survey. In the North Carolina study a census survey was determined to be the appropriate design to utilize in acquiring the required data from the law enforcement agencies, because of the need for specific data from all law enforcement agencies in the State. In addition the existence of the State Criminal Justice Planning Office and the Regional Planning Directors Office which could be utilized as centers to follow through on the various stages of the survey and to gain the cooperation of the agencies under their jurisdiction, ensured the completion of the questionnaires fully and on time. A high return rate is important in any survey, but it is particularly important in a census survey. A census survey should only be undertaken when there is a reasonable anticipation of being able to obtain completion forms from nearly 100 percent of the population of interest.

"Nonresponse" is a major problem in all surveys, and anyone attempting either a census or a sample survey should consult local experts on ways to combat bias introduced by persons who do not fill out and return the questionnaires.

The sociology department of the state or local university might be an excellent place to seek information on this and other problems connected with surveys before any state government or state agency undertakes a survey.

B. Why Do We Need A Survey?

Survey information serves a wide variety of uses. It is used by businesses in developing products or designing advertising campaigns. Surveys can serve as a basis for planning future governmental programs or courses of action and can be a means of evaluating on-going programs. With the ever-increasing accent on planning throughout the criminal justice system, surveys--correctly used--can prove to be a valuable tool.

In conducting a survey, careful attention must be paid to each step to ensure a satisfactory product at the end. Care must be taken so that everyone from whom data are needed is surveyed; that follow-ups are conducted to ensure a maximum return of completed questionnaires; that questionnaires are diligently checked and edited; that the data are finally utilized to the greatest advantage.

A survey is needed if information essential to program designers or planners has not already been collected through other methods. A survey is not, however, a panacea, and much time and effort is wasted annually in surveys which collect useless information, or which collect information which duplicates data available through other records. Respondents should not be asked to provide data to one governmental unit if they have already provided the same information to another unit, or for a different purpose, if that information is still accessible. There is at the present time much governmental concern about unnecessary burdens put upon persons who must respond to questionnaires and fill out forms, and current Federal legislation has the aim of reducing such burdens.

Do not conduct a survey if equivalent data have been collected by other means and simply need to be reorganized or aggregated in a different manner to make them useful. In such instances, time and funds are better spent building a systematized data base which will be available to the legitimate users of the information.

Since the subject of this manual is the conduct of surveys, we will not deal further here with methods for systematizing a data base. Systems analysts available through both governmental agencies or from private organizations can be consulted to help solve problems of building a unified data set from existing records.

C. Who Should Conduct A Survey?

Many private organizations conduct surveys professionally. Frequently state and local agencies hire such organizations to perform data collection operations for them under contract. Even if a state governmental unit should decide to contract out the actual survey work rather than conducting the survey themselves, officials should know enough about the procedure to have confidence in the manner in which the survey is being organized and run.

The State Criminal Justice Planning Organization is the ideal locus for a data-collection effort because its records usually include lists of all criminal justice agencies within each planning region. The agencies on these lists constitute the universe of interest for matters pertaining to criminal justice planning. A good list, which constitutes the universe for a census survey, or is the universe from which a sample may be drawn, is the first requirement of any successful survey.

As each Regional Planning Director has contact with all the criminal justice agencies in his area, he or a deputy from his office is in an excellent position to distribute survey materials and to supervise the checking and receipt of all questionnaires from agencies in his area.
Being "on the scene," each Regional Planning Director can ensure a maximum return of questionnaires from his region. The input from the regional directors can also be invaluable in deciding what data needs must be met by the survey.

Careful early planning and thorough liaison work must be carried out by the State Planning Office, whether or not its officials conduct the actual data collection operation, to ensure the acceptance of the purposes of the survey by all sectors of the state criminal justice system, and to see that the steps outlined below are followed.

D. What To Do Before You Start A Survey

Before launching any survey, certain preliminary steps must be taken.

1) There should be a thorough assessment of the adequacy of existing state-level statistical reports and records. Any information which can be reliably obtained from already-existing records should not be included as questions in a survey instrument. The aim of any good survey is to achieve as nearly universal response as possible; unnecessary questions merely add to the burden of the respondents and usually diminish completion rates.

In some states (as was actually the case in North Carolina--see II, C) some of these state-level records may well exist in information systems maintained by individual sectors of the state-wide criminal justice system. It is highly unlikely that the data from any such individualized systems are directly comparable as the systems were probably designed to meet varying needs. The survey instrument for a state survey can, and should, be modified for various sectors so that any information which is obtainable through existing systems need not be asked again in the questionnaire.

At the same time, the earliest planning for the survey must be made with a view toward convincing all sectors that their cooperation is essential if viable statewide statistics are to be obtained. Not all questions can be of equal interest or utility to all areas of the criminal justice system, but the effectiveness of manpower planning can be greatly enhanced if known statistics have comparability across the state as a whole. The possible loss of data from an entire sector, which may decline to enter the data-collection effort if the staff remains unconvinced of the utility of the survey for them, does irreparable damage to the survey. It can no longer exist as an entity for the state, but becomes literally a series of smaller surveys of different sectors of the criminal justice system within the state. The data gathered have relevance for the sector from which they came, but no statewide planning for the entire system can be based reliably upon such findings.

If problems of noncooperation are anticipated the State Planning Staff should seek some additional state authority before the launching of the survey to enforce compliance with the data-collection effort from all sectors which are to be included to the survey.

2) In the section above we dealt with the problems of meeting the needs and ensuring the cooperation of all sectors of the criminal justice system. In addition there should be a thorough review of the present methods of incorporating local and regional plans and input into the development of the state-wide comprehensive plans both within and across sectors. Some

common basis must be found so that the purposes of the state-wide plan as well as the data needs of local agencies can be met through the data instruments used. The questions asked in a data instrument should always serve a definite purpose. Ask only the questions you *need*, but be sure the real data needs at both the state and local levels are met.

3) There should be a determination as to whether questions should be asked at the agency level or should be asked of individual employees. Opinion and attitude questions can *only* be asked at the personal level. Manpower figures, numbers of vehicles operated by an agency, arrest statistics, etc. can only be satisfactorily obtained from agency-level records. Information obtained at any level can always be aggregated at a higher level, but it cannot be disaggregated below the level at which it was obtained.

An example of this would be as follows: agency-level data may yield the number of line personnel who are high school graduates and the number who are college graduates within that agency. The agency may also be able to supply data on to how many line persons are white, how many black and how many other minorities. In addition there probably are in existence agency records which group the ages of line personnel into categories such as 21-25, 26-34, 35-44 and 45 and over. However, if necessary information to be gathered from the survey is to be the number of black line personnel between 35 and 44 years of age who are college graduates, this information cannot be obtained from data *at the agency level*. It would have to come from information obtained at the individual level. If age, race and educational achievement had been included as questions on a survey instrument sent to all employees of the agency, the answers could be added together and this imaginary table could be constructed for the agency:

LINE PERSONNEL

Aged 35-44

Race	High School Graduates	College Graduates
Black	18	17
White	43	32
Other	3	2
Totals	64	51

Further, the data from this table could be aggregated (provided similar information had been collected at the individual level across various state agencies) at any level, such as all state law enforcement agencies or the criminal justice system for the entire state.

However, unless there is a demonstrated need for planners to have such detailed information, any state deciding on a survey should be aware that trying to survey all the individual employees in the criminal justice system is a Herculean task. Remember: The more questionnaires sent out, the more difficult it is to keep track of them and the less likely is a high return. Non-response is one of the worst forms of bias in survey research. It is extremely difficult to make any reliable estimates or projections when a great deal of the required data on which such estimates are based is missing. As can readily be seen, like any other successful venture, a good survey takes extremely careful prior planning.

E. Data Collection Instruments

A survey of selected respondents using a data collection instrument can take place through the use of interviewers who ask questions, either in person or over the telephone, of respondents and record the answers received; or data may be collected through the use of a self-administered questionnaire in which the respondent is usually asked a number of different kinds of questions. He may be asked to mark the appropriate answer in a set of possible alternatives (a "closed" question); he may be requested to write his answer in his own words in a space allotted for that purpose (an "open" question); or he may be asked to supply a series of numbers (e.g., the number of support personnel in his organization, the number of females employed by the organization, numbers of cameras owned by the agency, etc.).

In North Carolina all questionnaires were of the self-administered type, so this discussion will be primarily of that type of survey instrument.

1) Instructions. Because a self-administered questionnaire is self-contained, it must be carefully designed to avoid any confusion on the part of the respondent. Instructions to the respondent should be specific and clearly stated so that he knows exactly what is expected of him.

Accompanying the questionnaire should be a letter from someone in authority in the agency sponsoring the survey which describes the survey as a whole, explains the reasons for it, and asks for the cooperation of the respondent.

The first page of the questionnaire should contain concise directions to the respondent outlining the general tasks he should perform in filling out and completing the questionnaire. Included in this list of directions should be the name, address and telephone number of someone to whom questions about completion of the survey instrument may be directed.

In the body of the questionnaire more detailed instructions applying to specific questions should be included. These instructions should be printed in a different typeface from the questions themselves so that they can easily be identified as instructions. The typeface used for instructions should, of course, be uniform throughout the instrument or set of instruments. It is particularly important to indicate to the respondent that, because of his answer to a previous answer, he should "skip" the next question or series of questions. (See Addendum A for the questionnaires used in the North Carolina survey of law enforcement agencies which illustrate these various types of instructions to the respondent.)

a) Question Design. The questions in any survey instrument should be carefully designed so that basically.

a) they ask only one question at a time;

b) they are not biased, that is they do not "lead" the respondent into answering the question one particular way because of the manner in which the question is asked;

c) certain choices are presented, those choices should be exhaustive and not overlapping.

An illustrative example for a) above would be the following question:

Does your agency receive State or local governmental funds to be used for training purposes?

Yes 1

No 2

Don't know 3

The respondent probably would have no difficulty answering the question, but it would be impossible for the researchers to know from that question whether the agency receives only State funds, only local funds, or both. Much more precise information can be received if the question is broken out into two questions:

1. Does your agency receive State funds to be used for training purposes?

   Yes. 1

   No 2

   Don't know 3

2. Does your agency receive local governmental funds to be used for training purposes?

   Yes. 1

   No 2

   Don't know 3

Biased questions are those in which "loaded" terms are used. Such a question would be: "Most law-abiding citizens agree that there should be some form of gun-control legislation. Do you agree or disagree with that stand?" Even if the respondent feels strongly that there should not be gun-control legislation, it would probably be difficult for him to give an answer which apparently makes him other than a "law-abiding citizen." Most of the answers to such a question would undoubtedly be in the affirmative, yet this need not reflect the true feelings of the population being surveyed.

In the Law Enforcement Executive Opinion Questionnaire which was used in North Carolina the following question was asked:

Do you believe that the present North Carolina Habitual Offender Law should or should not be strengthened?

Should be strengthened 1

Should not be strengthened 2

Don't know 3

The question as stated is unbiased; it merely asks a question of opinion without qualifications. If it had been stated otherwise, such as: "In view of the rising crime statistics in North Carolina, do you believe the North Carolina Habitual Offender Law should or should not be strengthened?" It is *not* unbiased. In this example the respondent is being guided into giving a specific answer because of the wording of the question.

When categories are presented to a respondent be sure that all possibilities are presented to him. Consider this example:

How frequently does the Mobile Crime Lab visit your headquarters?

About once a year. 1
Two to 5 times a year. . . . 2
Six to 8 times a year. . . . 3
Nine to 12 times a year. . . 4
More than 12 times a year. . 5

If it happens that the Mobile Crime Lab *never* visits some agencies, the respondents from these agencies will find that they have been given no choice which fits their circumstances.

Suppose the categories for the question above had been stated as follows:

Never. 1
About once a year. 2
Two to 6 times a year. . . . 3
Six to 9 times a year. . . . 4
Nine to 12 times a year. . . 5
More than 12 times a year. . 6

Respondents would now have a place to indicate "never," but if the Mobile Lab had visited an agency exactly six or nine times, respondents from those agencies would be unable to decide with certainty into which category their answers belong. Many respondents when faced with such a dilemma solve their problem by not answering the question at all.

An additional way of assuring the inclusion of all categories in any set of choices is to add an "other" category if you are not certain that the set of alternatives offered to the respondent is an exhaustive list. Frequently the "other" category is followed by instructions to the respondent to "specify" the other category. In this way the researcher can determine whether he has left out a category which is common to many of the persons or agencies he is surveying, of if the "other" category merely covers a few exceptional cases. The following example, taken from the North Carolina Law Enforcement Technical Data Instrument, shows a use of "other" as an additional category.

Please indicate whether your department utilized the services of the following crime laboratories during the first six months of 1975.

	Yes Often	Yes Seldom	No Never
a. Federal Bureau of Investigation.	1	2	3
b. State Bureau of Investigation.	1	2	3
c. Charlotte Police Dept. Lab	1	2	3
d. Own department lab	1	2	3
e. Other (SPECIFY) ______________________.	1	2	3

3) Questionnaire Format. "Format" applies to the order and general arrangement of the questions within the body of the data-collection instrument. There are not set rules about formatting a questionnaire, but the experience of experts in the field indicates that questions should follow a logical order,

so that the flow of the questions makes sense to the respondent. Items dealing with the same or similar subjects should be grouped together. If at all possible these groups or "batteries" of questions can be put into sections with a heading for each section which indicates to the respondent the overall subject of the questions within that particular part of the questionnaire.

As stated earlier, the need for clarity and precision in the wording of questions cannot be overemphasized. In self-administered questionnaires, in particular, the "closed" format should be used whenever possible. If instructions are precise and the choices (or "codes") within the question are carefully planned ahead of time by the researchers, the use of closed questions allows the respondent simply to circle or check an appropriate answer which then can be compared statistically with answers received by other respondents.

It is sometimes argued that open questions elicit more varied and interesting answers than closed questions. Researchers find open questions invaluable in pretests when they are unsure as to the exact range of answers which might be expected for a certain question. But the variability of the answers to open questions makes those answers difficult to fit into codes; and ascertaining the comparability of answers from different respondents always is a difficult task. When factual data constitute the bulk of the desired information from a survey, the use of closed questions is the more efficient practice.

Questions which ask for numbers, such as numbers of vehicles, or numbers of personnel of a certain type, or salary amounts, are technically "open" questions, but since the information is extremely specific these open questions do not present the problems offered by open questions which ask the respondent to elaborate upon his behaviors, attitudes or opinions.

Formatting also includes any arrangement of questions, instructions, or symbols which assists the respondent in his task of getting through the questionnaire properly: that is, answering all the questions which apply to him, and skipping those which do not. Some questionnaires are designed with elaborate systems of boxes drawn around contingent questions, and arrows, lines and asterisks used to direct the respondent from one question to the next applicable question. The experience of the consultants in the North Carolina project has been that an easy format for the average respondent to follow is one in which he always answers each question in sequence unless he is specifically instructed to skip a certain question or group of questions which are not applicable to him. Leaving sufficient amounts of "white space" so that the questions do not appear crowded on the page is also advised. Figure 1, following, is an example of this type of format. It is a page of the questionnaire used for the Law Enforcement Executive Opinion Survey in North Carolina.

F. Where to Look for Further Information

No manual can cover all phases of survey research in depth, and this manual has many shortcomings because of the restricted nature of the project on which it is based. Anyone contemplating a survey should also consult some of the standard texts and selected books written by authorities in the field. Addendum F contains a selected bibliography of such volumes. While sampling procedures have not been discussed in this manual because the completed North Carolina surveys were census surveys, it is recognized that other states may wish to undertake surveys which are sample surveys. In view of the necessity for guidance in deciding upon a proper sample frame and drawing the appropriate sample for such a survey, some excellent books on sampling have been included in the bibliography.

FIGURE 1

Crime Laboratory

14. Do you use the SBI crime laboratory services?

Yes. 1

No (SKIP TO Q. 19) 2 37/3

15. IF YES: In your opinion, is the turn-around time Satisfactory?

No 1

Yes (SKIP TO Q. 17). 2 38/3

16. IF NOT SATISFACTORY: Please explain why it is not satisfactory.

____

____

____

____

☐☐

39-40/0

17. How do you rate the services of the SBI crime laboratory in general? (CIRCLE ONE ONLY)

Excellent. 1

Good 2

Fair 3

Poor 4

Very Poor. 5 41/6

18. In order to have the SBI improve its crime laboratory services, what suggestions would you have for improving them? Please include any such suggestions in the space provided below.

____

____

____

☐☐ 42-43/9

II. THE NORTH CAROLINA EXPERIENCE

A. Establishment of Priorities for Data Collection

In utilizing any of the information developed as a result of the prototype study, other states should be aware of three priorities which were established by the consultants during the survey in North Carolina.

1. The data collection project was directed so that the procedures and resulting instruments could readily serve as models for like operations in other areas.
2. The items of data collected were designed to conform as closely as possible in wording and general format to similar items in the National Manpower Survey so that comparisons could be drawn between the state data and nation-wide data items.
3. There was considerable effort exerted to meet North Carolina's stated requirements for specific information necessary for their own planning purposes, whether or not these items were of value in the overall National Manpower Survey.

This last objective was seen as an obligation to the chosen prototype state. It is assumed that any other state contemplating a data collection operation will also have requirements for some state-specific information, so that the procedure followed in North Carolina for collecting such information will be of assistance in pointing out to users how specialized information might be included within their own surveys through slight alterations in the model instruments.

B. Law Enforcement Executive Opinion and Technical Data Instruments

1. Development of the Instruments

The consultants from the organizations involved in conducting the National Manpower Survey met on June 12, 1975 in Charlotte, North Carolina with representatives from the 17 state regional planning areas and some members of the Law and Order Division staff from the capitol at Raleigh. The meeting enabled all of those persons who would be working together on the proposed data collection effort to get to know one another, to discuss in detail the procedures to be followed, and to decide upon the items to be included in the questionnaires.

At the preliminary meeting it was decided that the law enforcement agency questionnaires would be the first to be developed, and that there should be two data-collection instruments for each agency. These would be: 1) a Law Enforcement Executive Opinion Questionnaire, which was to be filled out personally by the Chief or Sheriff in each department; and 2) a Law Enforcement Technical Data Instrument. This instrument could be filled out by any person designated by the Chief or Sheriff who had access to agency files. Through the use of the two questionnaires the state planners could collect two different, but complementary, types of information--the opinions of agency heads on matters of planning or legislation, as well as factual manpower and budgeting information for each agency.

North Carolina had available to it, as sources for developing the necessary questions in the data collection operation, 1) a list of "coverage items" desired by the North Carolina planning staff itself; 2) a suggested list of items presented by the National Planning Association which were comparable to items asked in the National Manpower Survey; 3) the questionnaire used by the state the year before; and 4) a form which had been developed by the state planning office for inclusion in the North Carolina Data Book, a compilation of data pertaining to budgetary, manpower and performance statistics in the law enforcement agencies across the State. The form contained the information which was considered to be important for each separate agency. A copy of each of these documents is included in Addendum A.

Other states planning a survey of law enforcement agencies will now have the instruments developed in North Carolina available to them as models. However, each state should examine carefully its own data needs with the aim of eliminating questions which are not applicable to its own situation and of adding any necessary items of coverage for its own use. Any questions added to the instruments should be concisely worded and should be pretested before being incorporated into the final instrument for use in that state.

2. Substantive Areas Covered by the Instruments

a. The Executive Opinion Questionnaire

1) Minimum salary program, questions 1 through 6. These questions deal with the executive's attitude toward the continuation of the minimum salary program, its adequacy, and the manner in which it should be continued.
2) Personnel qualifications, questions 7 through 9.
3) Training academy questions, numbers 10 through 13. These questions allowed the developers of the curriculum for the training academy to learn which courses executives felt were important, and the procedures followed by various chiefs or sheriffs for releasing officers to attend courses.
4) The final section covers more general opinion questions of interest to the North Carolina planning staff. Other questions could easily be substituted in this section, using a similar

format for the desired questions.

b. The Law Enforcement Technical Data Instrument

1) Budgetary items, questions 1 through 3.

2) Personnel profile questions, numbers 4 through 17. These questions deal with numbers of personnel in various positions in the agency: sworn and unsworn, full and part-time. Some of the questions also deal with reasons for separation from the department during the previous year of full-time sworn personnel; the length of law enforcement service of such personnel; their age, sex and race distribution; position categories; and functions performed.

Note: Special attention should be paid to the descriptors of position categories and functions (questions 12 and 13). All persons within the agency should be accounted for in each of these questions, i.e. by position and by primary duty function. The categories in each question were precisely delineated so that they are exhaustive of all possibilities within each question and so that there is no overlap of categories between questions. In defining such categories it is very easy to slip into the error of describing a person's "position" simply by citing his function. However, to gain comparability across agencies it is essential to develop position categories which are broader than mere functional descriptors, and into which similar types of personnel from a variety of different agencies can be satisfactorily classified.

3) The next two sections of the questionnaire, questions 18 through 21 and question 22 deal with salaries and benefits to personnel within the agency.

4) The education and the training of various categories of personnel are covered in questions 23 through 27.

5) Entry requirements for new recruits and whether new personnel can be obtained through lateral transfers from other agencies are the subject of questions 28, 29 and 30.

6) The next section deals with departmental activities--in particular statistics on investigations and arrests (questions 31 through 40).

7) The last general section of the questionnaire ascertains numbers and kinds of equipment in use by the department (questions 41 through 46).

8) The final sections of the questionnaire are to be answered only by specified respondents:

    a) Sheriffs' departments only answer questions 47 and 48. If they have a juvenile unit, sheriffs would also answer 49 through 52.

    b) Police departments with a juvenile unit also answer questions 49 through 52.

    c) All departments certify the information included in the data instrument by an authorized signature in item 53, the concluding item in the questionnaire.

3. Format of the Instruments

The two Law Enforcement Instruments were used together, and each received the same identification number so that the data from them appear in the same data file. Data from the Law Enforcement Executive Opinion Questionnaire was punched into cards 01 and 02 of the file for each agency. The data from the Law Enforcement Technical Data Instrument was included in cards 03 through 17. Card and column designations were printed in the margins of the instruments so that data could be punched directly from the questionnaires, eliminating the need for transferring information onto code sheets prior to key-punching. In all cases, a sufficient number of columns was allowed for the *largest* possible answer. For example, although few departments had personnel numbering in the hundreds--requiring a 3-column field on the IBM card--three columns were routinely allowed. Key-punchers can be instructed to insert zeros in front of one or two column numbers to accommodate smaller numbers than allowed for; however, if an insufficient number of columns was allowed, there would be no way to include the correct numbers. The example below (from the Technical Data Instrument) illustrates this type of pre-columning. The number printed to the right of the column indicator was the "residual" category. If the columns were left blank, or the question was not applicable to a specific department, key-punchers were instructed to enter the residual category--in this case zeros--into the columns. An example is given below:

> What is the total number of *full-time personnel* positions that are *authorized* in your department budget during fiscal year 1975-76?

	Number	
a. Sworn positions	________	31-33/0
b. Unsworn positions	________	34-36/0
Total	________	37-39/0

Data for inclusion on an 18th card (for the Technical Data Instrument) was added to each questionnaire in the state planning office prior to data processing. This information was necessary for inclusion in the printouts desired by the planning office for each department in the law enforcement system. It was, however, readily available at the state level. As previously stated, it should not, therefore, be asked again of the respondents in the survey. Figure 2 shows a list of these items and the column designations for them.

The questions themselves in both instruments were straightforward, and could be answered either by circling a code number opposite the appropriate precoded answer, or by writing a number in the allowed space for questions which asked for numbers of persons, amounts of money, or other similar numerical data. In the Executive Opinion Questionnaire, three of the questions were open-ended, that is, they asked for the opinion of the executive, to be given in as much detail as he desired. The "blocks" found in these questions (numbers 16,18 and 26) were designed for the use of coders. Details as to procedures for editing and coding completed questionnaires prior to their computer processing will be described in Section 5, page 21.

4. Distribution and Control of Questionnaires

Concurrent with the development of the instruments themselves must be a formulation of the plans for distribution and control of the questionnaire. In North Carolina it was determined that the offices of the Regional Planning Directors presented excellent control points for the distribution of questionnaires to the agencies in each region. In some cases the Regional Planning Director himself assumed responsibility for the disbursement and collection of instruments--in other cases the responsibility was delegated.

This sequence of steps was followed:

FIGURE 2

Law Enforcement Technical Date Instrument

Card 18

		Column
CONTROL NUMBER		6-9
REGION (1 - 17)		10-11
COUNTY NUMBER		12-14
CITY NUMBER		15-17
AREA		18-20
POPULATION 1974		21-26
TOTAL CRIME INDEX		27-31
MURDER		32-33
RAPE		34-35
ROBBERY		36-39
AGRAVATED ASSAULT		40-43
BURGLARY, B &E		44-47
LARCENY		48-52
MOTOR VEHICLE THEFT		53-56
NUMBER MONTHS CONTRIBUTED		57-58
CARD NUMBER	18	79-80

1. The State Planning Office ascertained that its list of the names and addresses of the 17 regional directors was accurate and up-to-date.
2. The State Planning Office also developed from its central files a list, by region, of all sheriffs' and police offices, with the name of the sheriff or chief and the address of the office.
3. Three sets of labels were printed from the above list for each sheriff's or chief's office:
    a. one for the master control sheet, which was to be kept at the State Planning Office in Releigh;
    b. one for the control sheet maintained in the appropriate regional office; and
    c. one for the envelope in which the questionnaires were to be mailed to the specific chief or sheriffs' office.
4. A sufficient number of labels was printed with the office address of the regional director to allow one return envelope to be enclosed with each set of questionnaires. It was in these envelopes that the sheriffs or chiefs were to return the completed questionnaires to their own regional offices.
5. Each regional director received a list of sheriffs and chiefs of police in his own region. This list was in the form of a log, with spaces for entries which were to enable the director to keep track of the questionnaires for which he was responsible. Figure 3 is an example of the type of control sheet (log) used for this purpose.
6. ID numbers were assigned to all questionnaires prior to distribution. The four-digit identification included a first digit

FIGURE 3

Regional Office No. ____________

Regional Director ____________

Control Sheet (Log)

Agency Type ____________

I.D. Numbers ____________

Name	Date Sent Out	Date First Contact	First Follow Up	Second Follow Up	Date Received in Office	Checked For Completeness	Comments
Exec. Quest. TD:							
Exec. Quest. TD:							
Exec. Quest. TD:							
Exec. Quest. TD:							
Exec. Quest. TD:							
Exec. Quest. TD:							
Exec. Quest. TD:							
Exec. Quest. TD:							
Exec. Quest. TD:							

which designated the agency as being a county sheriff's office ("1"), a town or city police department ("2"), or a county police department ("3"). The subsequent three digits were used to number, in sequence, the agencies within each category starting with the first listed agency in Regional Planning Area #1, and progressing through the final agencies of each category in Regional Planning Area #17.

7. In the case of the North Carolina prototype study, the consultants arranged for the preparation of the packets for each agency. However, this could easily be handled at the State Planning Office for other surveys. The packages received by the area planning directors contained addressed and stuffed packets which were ready for mailing to the individual agencies. Each envelope contained the following:
   a. a letter from the State Planning Director explaining the purposes of the survey,
   b. one copy of the Executive Opinion Questionnaire,
   c. one copy of the Technical Data Instrument, and
   d. an envelope pre-addressed to the regional planning director's office for return of the materials.

8. Regional officers were to mail the questionnaires, recording the date sent in the log. If the questionnaires were not returned, completed, within 14 days, a follow-up contact was necessary either by phone or in person. The follow-up also was to be recorded in the log.

9. As questionnaires were returned to the regional office they were checked for completeness and the date of return noted. Outcomes (other than completions, such as refusals) were not recorded until after two follow-ups had been made. A space was available on the log for comments, if necessary, by the regional officer.

10. When all questionnaires were collected by the regional offices except for those very few respondents who had refused (the refusal rate was less than 2%), both questionnaires and the regional logs were sent to the State Planning Office in Raleigh. In this instance, the State Office in Raleigh sent them on to the consultants for editing, coding and data processing.

    (Data processing arrangements will undoubtedly vary from state to state as some will have their own units to perform such tasks while others will have to contract out this stage of the survey.)

In North Carolina, prior to the distribution of all materials to the Regional Directors, a briefing session was held for them in the State offices. The questionnaires were explained to them in detail, including the reason for certain alternative paths through the questionnaire ("skip patterns") for some respondents. By being made thoroughly familiar with the instruments the directors were able to check the questionnaires as they came into their offices and return those which were incomplete or improperly filled out. The role of the Regional Directors as distributors and collectors of the questionnaires for their region was carefully outlined for them. Copies of the hand-outs prepared for them for the briefing are on the next two pages of this manual.

Sept.-Oct., 1975

General Instructions for Regional Directors

1. Each Regional Director will get list of the sheriffs and chiefs of police within his region who will be receiving the two questionnaires. These lists (logs) will contain space for recording information necessary to keep track of the questionnaires.

2. Upon receiving packet, regional offices should immediately mail questionnaires out to agencies, record date sent out in the log.

3. A "first contact" should be made after one week to ensure receipt of questionnaire by each agency, to answer questions, to urge compliance within stipulated time. Date of this contact should be recorded in log.

4. After 14 days, 1st and 2nd follow-ups should be made, either by phone, or, if necessary, in person. Date and mode of follow-up should be recorded.

5. Upon receipt in regional office, each questionnaire should be stamped with the date of receipt and same date entered in log.

6. As questionnaires are returned to regional office, a careful check should be made for completeness - check to see that totals are correct and all questions answered. Phone to agencies for additional information, if necessary.

   Person checking for completeness should initial appropriate column in log.

7. When all questionnaires are collected by regional office, both questionnaires and regional logs should be sent to Raleigh by registered or certified mail, or brought in person. (Please make Xerox copies of all materials for your own files and to ensure against loss.)

Sept.-Oct., 1975

Regional Packets to Contain:

1. Set of general instructions.
   Sample instruments (1 of each). To be used for reference by Regional Director.

2. Regional lists (logs).

   a. List of sheriffs' departments, ID's in sequence (1001, 1002, 1003, etc.)

   b. List of police departments, ID's in sequence (2001, 2002, 2003, etc.)

   c. (If applicable) List of County police departments (3001, 3002, 3003, etc.)

3. Envelopes previously addressed to sheriffs' and police departments in region. Each envelope will contain:

   a. Cover letters.

   b. Two (2) questionnaires--Executive Opinion Questionnaire, TDI.

   c. Return envelope addressed to Regional Director.

4. Replacement questionnaires and envelopes to be used if necessary.

Raleigh

1. Duplicates of regional lists.

BSSR - Washington

1. Duplicates of regional lists.

In the North Carolina case, timing conflicts necessitated the scheduling of the briefing session for Regional Directors before all materials for the survey were printed. Therefore, the materials (the questionnaires, the log sheets, etc.) were sent to the regional offices approximately one week after the session by means of a delivery service. The preference would have been to distribute the materials at the briefing session to ensure receipt by the director of the proper packet, and to allow each director to check his own materials and to ask questions which might arise about them. We would recommend the latter procedure for other states conducting a similar survey.

5. Preparation For Data Processing

As stated above the questionnaires were checked for completeness at the area planning offices. They were checked again at the State Planning Office upon receipt there, and the data for the final card was filled in and attached to each questionnaire. In addition each questionnaire received careful checking and editing in preparation for key-punching of the data. Since the instruments were designed essentially in the "pre-coded" format, this was not an arduous or time-consuming task. Examples of the editing instructions for both the Law Enforcement Executive Opinion Questionnaire and the Technical Data Instrument can be found in Addendum B.

Editors were required to develop codes only for the three open questions mentioned in Section C. Code-developing was accomplished in the following manner:

1. As questionnaires were received for processing, the answers to open-ended questions were written on file cards by the coders until 35-50 answers had been recorded. These answers were then examined by analysts for similarities and differences between answers, which

would indicate the types of categories of answers being received. Figure 4 below shows the code that was developed in this manner from representative answers to question #26 of the Executive Opinion Questionnaire.

2. Once a code had been developed for open-ended question, coders then checked each others' coding of that question until it was apparent that they were all coding the responses in an equivalent manner. As was previously stated, the actual code designation in this particular survey could be inserted in the blocks within the body of the questionnaire itself for the appropriate questions.

FIGURE 4

26. From your experience in the law enforcement field are there any additional comments or suggestions you would like to make to help improve law enforcement in North Carolina?

Card 02

Column 60-61

Improve salaries for law enforcement officers.	01
Improve training for law enforcement personnel	02
Stricter penalties or death penalty for offenders	03
Improve judicial system	04
More resources for local agencies	05
Reduce amount of red tape and paper work in law enforcement agencies.	06
Other	07
No answer	99

6. Presentation of Data

All the data from the Executive Opinion Questionnaire was printed in computer-generated tables which were run by the sheriff, police, and county police designations. The same data were also run by region for the aggregate of all law enforcement agencies. Examples of these tables follow as Figures 5 and 6.

The primary use of the data from the Technical Data Instrument was in printing data for presentation in the form to be used for the North Carolina Data Book mentioned previously in Section 1, one for each of the sheriffs' and police departments. It should be noted that in the course of developing the survey, the form was somewhat amended from the original, although most of the items were retained. Three sets of summary data, utilizing the same computer printout format, were printed for each region--one for sheriffs' offices within the region, one for police departments, and one for all regional law enforcement agencies combined. Using equivalent break-downs, the data were also run in summary form for the state as a whole. The same computer print-out format was followed in every case. The North Carolina summary tables showing the state statistics for sheriffs' departments, police departments, and for the law enforcement agencies combined are shown in Figures 7A, 7B and 7C.

7. Summary

The collection of data from the local law enforcement agencies throughout the state constituted the major portion of the effort for which the consultants were able to give assistance to the State of North Carolina. The step-by-step procedures resulting from this effort can serve as a model for any similar survey which might be contemplated by other states. It should be noted, however, that if coverage is desired for the entire criminal justice system, the procedures described above must be duplicated for each area in the criminal justice system covered by the survey--questionnaires must be developed and means must be found for distribution of these additional questionnaires.

FIGURE 5

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BSSR 467-01  LAW ENFORCEMENT EXECUTIVE OPINION                                          12/12/75

FILE    467UI.A  (CREATION DATE = 12/12/75)

* * * * * * * * * * * * * * * * * *  C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * *
   V244      CIV ONLY POLICE POSSESSION OF GUNS LAW         BY V106      TYPE OF DEPARTMENT
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                   V106
             COUNT  I
           ROW PCT ISHERIFF   POLICE    STATE      ROW
           COL PCT I                    POLICE     TOTAL
           TOT PCT I     1  I      2  I      3  I
V244       --------I--------I--------I--------I
                 1 I    16  I   101  I     0  I   117
  SHOULD   BE A LAW I  13.7  I  86.3  I   0.0  I  27.6
                   I  16.5  I  31.2  I   0.0  I
                   I   3.8  I  23.8  I   0.0  I
                  -I--------I--------I--------I
                 2 I    73  I   196  I     3  I   272
  SHOULD  NOT      I  26.8  I  72.1  I   1.1  I  64.2
                   I  75.3  I  60.5  I 100.0  I
                   I  17.2  I  46.2  I   0.7  I
                  -I--------I--------I--------I
                 3 I     8  I    27  I     0  I    35
  DK               I  22.9  I  77.1  I   0.0  I   8.3
                   I   8.2  I   8.3  I   0.0  I
                   I   1.9  I   6.4  I   0.0  I
                  -I--------I--------I--------I
                 4 I    1M  I    1M  I    0M  I    2M
  NA               I   0.0  I   0.0  I   0.0  I   0.0
                   I   0.0  I   0.0  I   0.0  I
                   I   0.0  I   0.0  I   0.0  I
                  -I--------I--------I--------I
            COLUMN      97       324        3      424
             TOTAL    22.9      76.4      0.7    100.0

 NUMBER OF MISSING OBSERVATIONS =
```

FIGURE 6

```
NSSR 467-    LAW ENFORCEMENT EXECUTIVE OPINION                                             12/15/75

FILE    467UF.A  (CREATION DATE = 12/15/75)

* * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * *
    V244      GIV ONLY POLICE POSSESSION OF GUNS LAW        BY  V107A  -   REGION
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  2

                    V107A
           COUNT  I
         ROW PCT  I                                                                                                 ROW
         COL PCT  I                                                                                                TOTAL
         TOT PCT  I      1  I      2  I      3  I      4  I      5  I      6  I      7  I      8  I      9  I     10  I
V244     ---------I---------I---------I---------I---------I---------I---------I---------I---------I---------I---------I
               1  I      5  I      2  I      0  I      7  I      4  I      6  I     13  I      7  I     10  I      4  I     117
  SHOULD  BE A LAW I    4.3  I    1.7  I    0.0  I    6.0  I    3.4  I    5.1  I   11.1  I    6.0  I    8.5  I    3.4  I    27.6
                  I   26.3  I   14.3  I    0.0  I   38.9  I   23.5  I   13.0  I   29.5  I   29.2  I   31.3  I   23.5  I
                  I    1.2  I    0.5  I    0.0  I    1.7  I    0.9  I    1.4  I    3.1  I    1.7  I    2.4  I    0.9  I
                 -I---------I---------I---------I---------I---------I---------I---------I---------I---------I---------I
               2  I     13  I     11  I     16  I      9  I     11  I     35  I     27  I     16  I     20  I     11  I     272
  SHOULD  NOT     I    4.8  I    4.0  I    5.9  I    3.3  I    4.0  I   12.9  I    9.9  I    5.9  I    7.4  I    4.0  I    64.2
                  I   68.4  I   78.6  I  100.0  I   50.0  I   64.7  I   76.1  I   61.4  I   66.7  I   62.5  I   64.7  I
                  I    3.1  I    2.6  I    3.8  I    2.1  I    2.6  I    8.3  I    6.4  I    3.8  I    4.7  I    2.6  I
                 -I---------I---------I---------I---------I---------I---------I---------I---------I---------I---------I
               3  I      1  I      1  I      0  I      2  I      2  I      5  I      4  I      1  I      2  I      2  I      35
  DK              I    2.9  I    2.9  I    0.0  I    5.7  I    5.7  I   14.3  I   11.4  I    2.9  I    5.7  I    5.7  I     8.3
                  I    5.3  I    7.1  I    0.0  I   11.1  I   11.8  I   10.9  I    9.1  I    4.2  I    6.3  I   11.8  I
                  I    0.2  I    0.2  I    0.0  I    0.5  I    0.5  I    1.2  I    0.9  I    0.2  I    0.5  I    0.5  I
                 -I---------I---------I---------I---------I---------I---------I---------I---------I---------I---------I
               4  I     0M  I     0M  I     1M  I     0M  I     0M  I     0M  I     0M  I     0M  I     0M  I     0M  I      2M
  NA              I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I     0.0
                  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I
                  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I
                 -I---------I---------I---------I---------I---------I---------I---------I---------I---------I---------I
          COLUMN        19        14        16        18        17        46        44        24        32        17       424
           TOTAL       4.5       3.3       3.8       4.2       4.0      10.8      10.4       5.7       7.5       4.0     100.0
(CONTINUED)
```

FIGURE 6 (Cont'd)

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                                                                                         11/15/75
BSSR 467-0:  LAW ENFORCEMENT EXECUTIVE OPINION

FILE    NO761.A  (CREATION DATE = 11/15/75)

* * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * *
   V244      WIV ONLY POLICE POSSESSION OF GUNS LAW        BY  V107A     REGION
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  2 OF  2

                  V107A
           COUNT  I
         ROW PCT  I                                                                                  ROW
         COL PCT  I                                                                                  TOTAL
         TOT PCT  I     11  I     12  I     13  I     14  I     15  I     16  I     17  I
V244     ---------I---------I---------I---------I---------I---------I---------I---------I
               1  I     14  I      7  I      8  I      6  I     10  I     10  I      4  I    117
  SHOULD BE A LAW I   12.0  I    6.0  I    6.8  I    5.1  I    8.5  I    8.5  I    3.4  I   27.6
                  I   37.8  I   46.7  I   50.0  I   23.1  I   25.6  I   37.0  I   23.5  I
                  I    3.3  I    1.7  I    1.9  I    1.4  I    2.4  I    2.4  I    0.9  I
                 -I---------I---------I---------I---------I---------I---------I---------I
               2  I     19  I      8  I      7  I     19  I     22  I     17  I     11  I    272
  SHOULD NOT      I    7.0  I    2.9  I    2.6  I    7.0  I    8.1  I    6.3  I    4.0  I   64.2
                  I   51.4  I   53.3  I   43.8  I   73.1  I   56.4  I   63.0  I   64.7  I
                  I    4.5  I    1.9  I    1.7  I    4.5  I    5.2  I    4.0  I    2.6  I
                 -I---------I---------I---------I---------I---------I---------I---------I
               3  I      4  I      0  I      1  I      1  I      7  I      0  I      2  I     35
  DK              I   11.4  I    0.0  I    2.9  I    2.9  I   20.0  I    0.0  I    5.7  I    8.3
                  I   10.8  I    0.0  I    6.3  I    3.8  I   17.9  I    0.0  I   11.8  I
                  I    0.9  I    0.0  I    0.2  I    0.2  I    1.7  I    0.0  I    0.5  I
                 -I---------I---------I---------I---------I---------I---------I---------I
               4  I     0M  I     0M  I     0M  I     0M  I     1M  I     0M  I     0M  I     2M
  NA              I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0
                  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I
                  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I    0.0  I
                 -I---------I---------I---------I---------I---------I---------I---------I
          COLUMN        37        15        16        26        39        27        17        424
           TOTAL       8.7       3.5       3.8       6.1       9.2       6.4       4.0      100.0

NUMBER OF MISSING OBSERVATIONS =      2
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FIGURE 7A

SHERIFFS' DEPARTMENTS

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LAW ENFORCEMENT TECHNICAL DATA INSTRUMENT REPORT - PAGE 1 OF 2
SUMMARY REPORT FOR THE STATE OF NORTH CAROLINA

                                                                      POPULATION (JULY 1,1974)  2032877
                                                                      AREA                        46054
                                                                      OFFICER/100,000                83
                                                                      DEPT. BUDGET/1,000         $12136
                                                                      TOTAL PART 1 CRIMES (1974)  41871
                                                                      CRIMES PER 100,000 (1974)    1478
BUDGET INFORMATION (FY 1975-1976)

 TOTAL BUDGET                    34300462
 TOTAL PERSONNEL BUDGET          23685386
 TOTAL TRAINING BUDGET             232327

PERSONNEL PROFILE                                                  SALARY INFORMATION (FULL-TIME SWORN)

 TOTAL FULL-TIME POSITIONS       2856     DUTY POSITIONS:     SWORN UNSWORN    AUTHORIZED ANNUAL RANGE: LOWEST  HIGHEST
  (AUTHORIZED         SWORN      2437      TOP ADMIN           157      2           CHIEF/SHERIFF       $ 7500   $26304
   FY1975-1976)     UNSWORN       419      LEGAL ADVICE          1      2           ASST CHF/CHF DEPS        0    20184
                                           ADMIN ASSIST         81      7           CAPTAINS                 0    17052
 NEW POSITIONS AUTHORIZED         223      TRAINING              6      0           LIEUTENANTS              0    15468
  (AS OF JULY 1, 75) SWORN        182      PLANNING              3      0           SERGEANTS                0    14052
                   UNSWORN         41      PERSONNEL             7      1           PATROLMEN/DEPUTIES    6000    12240
                                           INTERNAL INSPEC       3      0
 TOTAL FULL-TIME PERSONNEL       2756      TRAFFIC/ACCIDENT      3      9      SALARY RANGE DISTRIBUTION           2354
  (ACTUAL             SWORN      2352      GENERAL PATROL      940      9       (JULY 1, 75) $ 6,000 TO  6,500    141    6.0%
   JULY 1,1975)     UNSWORN       404      LOCK-UP/JAIL        325    166                    $ 6,500 TO  7,000    205    8.7%
                                           BAILIFF/CT LIAS      84     14                    $ 7,000 TO  8,000    671   28.5%
 TOTAL PART-TIME PAID             316      CIVIL/CAPIAS        173      6                    $ 8,000 TO  9,000    578   24.6%
  (ACTUAL             SWORN       188      NARCOTICS            35      0                    $ 9,000 TO 10,000    426   18.1%
   JULY 1,1975)     UNSWORN       128      VICE                  1      0                    $10,000 TO 12,000    217    9.2%
                                           INTEL/ORG CRM         7      0                    $12,000 TO 15,000     87    3.7%
 TOTAL PART-TIME UNPAID           636      GEN INVESTIGATV     211      2                    $15,000 TO 20,000     23    1.0%
  (JULY 1,1975)       SWORN       604      CRIME PREVENT        33      0                            OVER 20,000      6    0.3%
                    UNSWORN        32      CRIME LAB             5      0
                                           COMM REL/SERVICE     10      0      NUMBER WORKING SECOND JOB           264
 TOTAL FULL-TIME SWORN            378      SCHOOL LIASON         6      0                                        11.2%
  (SEPARATED FROM     DEATH        19      JUVENILE ENFRC       30      0
   DEPT. DURING      RESIGN       247      COMMUNICATIONS      124     68
   FY1969-1975)      RETIRE        41      RECORDS/DATA PR      27     12      BENEFITS (FULL-TIME SWORN)       PER CENT DEP'TS
                    DISMISS        41      GEN SEC/CLERIC       56     70                                         WITH BENEFIT
                      OTHER        30      MAINTENANCE           5     13       RETIREMENT                              84.7%
                                           OTHER                47     17       LIFE INSURANCE                          51.0%
 LENGTH OF SERVICE           2367          TOTAL              2376    386       HOSPITAL INSURANCE                      72.4%
  (FULL-TIME      UNDER 1 YR  478  20.2%                                        ACCIDENT/DISABILITY INSURANCE           44.9%
   SWORN TO     1 TO  3 YRS   589  24.9%   NUMBER OF RESERVE                    FALSE ARREST INSURANCE                  44.9%
   JULY 1,1975) 3 TO  5 YRS   523  22.1%    & AUXILIARY          1943           WORKMENS COMPENSATION                   90.8%
                5 TO 10 YRS   451  19.1%                                        HAZARDOUS DUTY PAY                       3.1%
               10 TO 15 YRS   180   7.6%                                        NIGHT DUTY PAY                           3.1%
               15 TO 25 YRS   117   4.9%                                        PAID COURT TIME                          9.2%
               25 AND OVER     29   1.2%                                        UNIFORM PURCHASE/REPLACEMENT            94.9%
                                                                                EQUIPMENT PURCHASE/REPLACEMENT          82.7%
 AGE OF FULL-TIME SWORN      2357                                               VACATION LEAVE                          90.8%
  (JULY 1,1975)    UNDER 25   313  13.3%                                        SICK LEAVE                              87.8%
                   25 TO 30   484  20.5%                                        OTHER                                    6.1%
                   30 TO 40   616  26.1%
                   40 TO 50   521  22.1%
                   50 TO 60   322  13.7%
                   60 TO 65    84   3.6%
                    OVER 65    17   0.7%



LAW ENFORCEMENT TECHNICAL DATA INSTRUMENT REPORT - PAGE 2 OF 2

FULL-TIME DISTRIBUTION                   RACE/SEX                        EDUCATION (FULL-TIME SWORN)
                                                                         COMPLETED AS OF JULY 1,1975

                                                                                             SOME
                                                 NON          NON           LESS             COLL
                                          WHITE WHITE WHITE WHITE           THAN   HS OR     NO                       GRAD
                           TOTALS         MALE  MALE  FEM   FEM             HS     GED       DEG    AA/AS   BA/BS    DEG

 TOP ADMIN/TOP MGMT         168   6.2%     166     0     1     0              22      94      39       3      10       2
 GEN COMMAND/MID MGMT       201   7.4%     188     6     5     0              15     113      43      10       0       4
 1ST LINE SUPERVISORY       250   9.3%     207    21     2     0              23     142      48      11       4       1
 1ST LINE LAW ENFRC/CUST   1639  60.6%    1340   182    95    22             107    1140     253      71      52       8
 TECH & PROF CIVILIAN        99   3.7%      57     4    32     4
 OTHER CIVILIAN/SUPPORT     201   7.4%      55    17   105    25
 ALL OTHERS                 138   5.1%      82     6    24     6              17      67       9       6       3       0

      TOTALS               2704           2095   238   262    57             184    1556     389     101      69      16
                                          77.5%  8.8%  9.7%  2.1%            7.8%  66.2%   16.5%    4.3%    2.9%    0.7%

TRAINING (FULL-TIME SWORN)   HOURS IN-SERVICE TRAINING           ENROLLED IN              392
                               0   1-16 17-39  40+                GED                     29    7.4%
 TOP ADMIN/TOP MGMT           75    15    12    47                TWO YEAR DEGREE        277   70.7%
 GEN COMMAND/MID MGMT         58    43    29    63                FOUR YEAR DEGREE        82   20.9%
 1ST LINE SUPERVISORY         76    28    14    83                GRADUATE DEGREE          4    1.0%
 1ST LINE OFFICERS           519   258   133   489
 ALL OTHERS                   10    13     1     6               EDUCATIONAL BENEFITS        PER CENT DEP'TS
                                                                                              WITH BENEFIT
      TOTALS                 728   357   189   688                ADJUST SCHEDULES              74.5%
                                                                  TIME OFF                      52.0%
  NUMBER WITH NO IN-SERVICE TRAINING WHO RECEIVED                 SUBSIDY                       38.8%
    BASIC TRAINING IN FY 1974-1975                 220            INCREASE IN PAY                6.1%
                                                                  PROMOTIONS                    22.4%

POLICY                                          PER CENT DEP'TS
                                                RESPONDING YES
 PERSONNEL CAN MOVE TO YOUR AGENCY
   WITHOUT LOSS OF RANK                              10.2%
 DEPARTMENT ANALYZE REPORTED CRIME DATA
   FOR MANPOWER ALLOCATION                           29.6%
 WRITTEN POLICIES AND PROCEDURES MANUAL              30.6%


DEPARTMENTAL ACTIVITIES

 TOTAL CALLS RECORDED JAN 74-DEC 74   336778
 INVESTIGATIONS DURING JAN 74-DEC 74   95786
 NON TRAFFIC RELATED INVESTIGATIONS    65469
 NUMBER JUVENILE PETITIONS INITIATED    3341


TOTAL NUMBER OF JAILORS     608
            MALE JAILORS    416                                     99999999 OR 999'S INDICATE
                 MATRONS    192                                     "NOT ASCERTAINED"
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FIGURE 7B

POLICE DEPARTMENTS

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LAW ENFORCEMENT TECHNICAL DATA INSTRUMENT REPORT - PAGE 1 OF 2
SUMMARY REPORT FOR THE STATE OF NORTH CAROLINA
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                                   POPULATION (JULY 1,1974)  2540620
                                   AREA                         1031
                                   OFFICERS/100,000              224
                                   DEPT. BUDGET/1,000         033073
                                   TOTAL PART 1 CRIMES (1974) 134270
                                   CRIMES PER 100,000 (1974)    5275
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BUDGET INFORMATION (FY 1975-1976)

 TOTAL BUDGET                  86226351
 TOTAL PERSONNEL BUDGET        69600822
 TOTAL TRAINING BUDGET          1626752

PERSONNEL PROFILE

 TOTAL FULL-TIME POSITIONS         6672
  (AUTHORIZED          SWORN       5749
   FY1975-1976)      UNSWORN        923

 NEW POSITIONS AUTHORIZED           263
  (AS OF JULY 1, 75) SWORN          225
                     UNSWORN         38

 TOTAL FULL-TIME PERSONNEL         6621
  (ACTUAL              SWORN       5704
   JULY 1,1975)      UNSWORN        917

 TOTAL PART-TIME PAID               666
  (ACTUAL              SWORN        370
   JULY 1,1975)      UNSWORN        296

 TOTAL PART-TIME UNPAID             621
  (JULY 1,1975)        SWORN        566
                     UNSWORN         48

 TOTAL FULL-TIME SWORN              921
  (SEPARATED FROM      DEATH         20
   DEPT. DURING       RESIGN        623
   FY1967-1975)       RETIRE         74
                     DISMISS        104
                       OTHER         90

 LENGTH OF SERVICE               5179
  (FULL-TIME       UNDER 1 YR     779  15.0%
   SWORN TO       1 TO  3 YRS    1257  24.3%
   JULY 1,1975)   3 TO  5 YRS     830  16.0%
                  5 TO 10 YRS     977  18.9%
                 10 TO 15 YRS     463   8.9%
                 15 TO 25 YRS     621  12.0%
                 25 AND OVER      252   4.9%

 AGE OF FULL-TIME SWORN          5183
  (JULY 1,1975)     UNDER 25      909  17.5%
                    25 TO 30     1411  27.2%
                    30 TO 40     1370  26.4%
                    40 TO 50      849  16.4%
                    50 TO 60      507   9.8%
                    60 TO 65      117   2.3%
                     OVER 65       12   0.2%
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DUTY POSITIONS:     SWORN UNSWORN
 TOP ADMIN            344       2
 LEGAL ADVICE          11      14
 ADMIN ASSIST          72       9
 TRAINING              48       6
 PLANNING              22       6
 PERSONNEL             25       2
 INTERNAL INSPEC       26       0
 TRAFFIC/ACCIDENT     333      26
 GENERAL PATROL      3490      24
 LOCK-UP/JAIL          13       8
 BAILIFF/CT LIAS        7       3
 CIVIL/CAPIAS          15       0
 NARCOTICS             89       1
 VICE                  59       0
 INTEL/ORG CRM         30       0
 GEN INVESTIGATV      421       3
 CRIME PREVENT         65       2
 CRIME LAB             50      28
 COMM REL/SERVICE      67       8
 SCHOOL LIASON         34       5
 JUVENILE ENFRC        96       3
 COMMUNICATIONS       170     298
 RECORDS/DATA PR       75     161
 GEN SEC/CLERIC        10     191
 MAINTENANCE           10      42
 OTHER                 40      63
 TOTAL               5692     904

NUMBER OF RESERVE
 & AUXILIARY             4441
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SALARY INFORMATION (FULL-TIME SWORN)

 AUTHORIZED ANNUAL RANGE: LOWEST  HIGHEST
      CHIEF/SHERIFF       $ 7200  $35000
      ASST CHF/CHF DEPS        0   25360
      CAPTAINS                 0   18924
      LIEUTENANTS           8000   16447
      SERGEANTS             7500   14918
      PATROLMEN/DEPUTIES    6000   13452

 SALARY RANGE DISTRIBUTION           5723
  (JULY 1, 75) $ 6,000 TO  6,500     276    4.8%
               $ 6,500 TO  7,000     309    5.4%
               $ 7,000 TO  8,000    1067   18.7%
               $ 8,000 TO  9,000    1019   17.9%
               $ 9,000 TO 10,000     781   13.7%
               $10,000 TO 12,000    1012   17.7%
               $12,000 TO 15,000    1094   19.2%
               $15,000 TO 20,000     141    2.5%
                       OVER 20,000    25    0.4%

 NUMBER WORKING SECOND JOB           754
                                    13.2%

BENEFITS (FULL-TIME SWORN)       PER CENT DEP'TS
                                   WITH BENEFIT
 RETIREMENT                            67.4%
 LIFE INSURANCE                        67.1%
 HOSPITAL INSURANCE                    76.7%
 ACCIDENT/DISABILITY INSURANCE         33.0%
 FALSE ARREST INSURANCE                22.0%
 WORKMENS COMPENSATION                 95.1%
 HAZARDOUS DUTY PAY                     2.1%
 NIGHT DUTY PAY                         3.0%
 PAID COURT TIME                       34.0%
 UNIFORM PURCHASE/REPLACEMENT          93.9%
 EQUIPMENT PURCHASE/REPLACEMENT        86.4%
 VACATION LEAVE                        95.7%
 SICK LEAVE                            89.4%
 OTHER                                 12.5%
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LAW ENFORCEMENT TECHNICAL DATA INSTRUMENT REPORT - PAGE 2 OF 2

FULL-TIME DISTRIBUTION               RACE/SEX                      EDUCATION (FULL-TIME SWORN)
                                                                   COMPLETED AS OF JULY 1,1975
                                                                                 SOME
                                           NON         NON          LESS         COLL
                                     WHITE WHITE WHITE WHITE        THAN  HS OR  NO                  GRAD
                         TOTALS      MALE  MALE  FEM   FEM          HS    GED    DEG   AA/AS BA/BS   DEG

 TOP ADMIN/TOP MGMT       309   4.6%   302     6     1     0          59   229   118     30    12      3
 GEN COMMAND/MID MGMT     365   5.5%   333    32     0     0          49   209    57     50    20      2
 1ST LINE SUPERVISORY     819  12.3%   721    89     3     2          62   406   146    150    39      6
 1ST LINE LAW ENFRC/CUST 3760  56.7%  3219   480    37    22         139  2189   773    415   160      7
 TECH & PROF CIVILIAN     345   5.2%   200    12   121    23
 OTHER CIVILIAN/SUPPORT   536   8.1%   188    29   289    40
 ALL OTHERS               329   5.0%   113    20    40    10           8    62    24     13     3      0

      TOTALS             6626         5340   660   514   106         317  3175  1160    712   247     14
                                     80.6%  9.9%  7.7%  1.6%        5.4% 55.6% 20.3%  12.5%  4.3%   0.2%

                                                                   ENROLLED IN          1130
                                                                    GED                   28   2.4%
                                                                    TWO YEAR DEGREE      690  60.4%
                                                                    FOUR YEAR DEGREE     396  34.9%
                                                                    GRADUATE DEGREE       36   3.1%

TRAINING (FULL-TIME SWORN)   HOURS IN-SERVICE TRAINING
                                 0   1-16 17-39  40+
 TOP ADMIN/TOP MGMT            149    43    49   147
 GEN COMMAND/MID MGMT          170    36    79   166
 1ST LINE SUPERVISORY          171    99   114   398
 1ST LINE OFFICERS             979   366   717  1200
 ALL OTHERS                     58    11     7    74

      TOTALS                  1527   595   966  1960

  NUMBER WITH NO IN-SERVICE TRAINING WHO RECEIVED
    BASIC TRAINING IN FY 1974-1975                412

                                                                   EDUCATIONAL BENEFITS     PER CENT DEP'TS
                                                                                              WITH BENEFIT
                                                                    ADJUST SCHEDULES             64.0%
                                                                    TIME OFF                     51.5%
                                                                    SUBSIDY                      30.4%
                                                                    INCREASE IN PAY               9.8%
                                                                    PROMOTIONS                   26.0%

POLICY                                        PER CENT DEP'TS
                                              RESPONDING YES
 PERSONNEL CAN MOVE TO YOUR AGENCY
   WITHOUT LOSS OF RANK                           8.0%
 DEPARTMENT ANALYZE REPORTED CRIME DATA
   FOR MANPOWER ALLOCATION                       26.9%
 WRITTEN POLICIES AND PROCEDURES MANUAL          44.3%


DEPARTMENTAL ACTIVITIES

 TOTAL CALLS RECORDED JAN 74-DEC 74 1325962
 INVESTIGATIONS DURING JAN 74-DEC 74 464481
 NON TRAFFIC RELATED INVESTIGATIONS  348893
 NUMBER JUVENILE PETITIONS INITIATED   9115


TOTAL NUMBER OF JAILERS      0
             MALE JAILERS    0                                     99999999 OR ***'S INDICATE
                  MATRONS    0                                     'NOT ASCERTAINED'
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FIGURE 7C

COMBINED LAW ENFORCEMENT AGENCIES

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LAW ENFORCEMENT TECHNICAL DATA INSTRUMENT REPORT - PAGE 1 OF 3
SUMMARY REPORT FOR THE STATE OF SOUTH CAROLINA
                                                                   POPULATION (JULY 1,1974)  2776697
                                                                   AREA                        31055
                                                                   OFFICERS/100,000              150
                                                                   DEPT. BUDGET/1,000         122409
                                                                   TOTAL PART 1 CRIMES (1974) 175160
                                                                   CRIMES PER 100,000 (1974)    5557
BUDGET INFORMATION (FY 1975-1976)

 TOTAL BUDGET                      120527368
 TOTAL PERSONNEL BUDGET             93586704
 TOTAL TRAINING BUDGET               1650071

PERSONNEL PROFILE                                                 SALARY INFORMATION (FULL-TIME SWORN)

 TOTAL FULL-TIME POSITIONS          9728   DUTY POSITIONS:   SWORN UNSWORN   AUTHORIZED ANNUAL RANGE: LOWEST  HIGHEST
  (AUTHORIZED          SWORN        8386    TOP ADMIN          506      4       CHIEF/SHERIFF         $ 7200  $75000
   FY1975-1976)      UNSWORN        1342    LEGAL ADVICE        12     16       ASST CHF/CHF DEPS          0   25368
                                            ADMIN ASSIST       123     16       CAPTAINS                   0   19720
 NEW POSITIONS AUTHORIZED            506    TRAINING            56      6       LIEUTENANTS             6000   16667
  (AS OF JULY 1, 75) SWORN           407    PLANNING            27      6       SERGEANTS               7560   16018
                   UNSWORN            99    PERSONNEL           32      3       PATROLMEN/DEPUTIES      6000   13452
                                            INTERNAL INSPEC     39      0
 TOTAL FULL-TIME PERSONNEL          9377    TRAFFIC/ACCIDENT   336     26    SALARY RANGE DISTRIBUTION          8076
  (ACTUAL              SWORN        8056    GENERAL PATROL    4055     33     (JULY 1, 75) $ 6,000 TO  6,500     415   5.2%
   JULY 1,1975)      UNSWORN        1321    LOCK-UP/JAIL       338    176                  $ 6,500 TO  7,000     514   6.4%
                                            BAILIFF/CT LIAS     91     17                  $ 7,000 TO  8,000    1730  21.4%
 TOTAL PART-TIME PAID               1010    CIVIL/CAPIAS       191      6                  $ 8,000 TO  9,000    1597  19.8%
  (ACTUAL              SWORN         586    NARCOTICS          122      1                  $ 9,000 TO 10,000    1267  15.6%
   JULY 1,1975)      UNSWORN         424    VICE                69      0                  $10,000 TO 12,000    1229  15.2%
                                            INTEL/ORG CRM       37      0                  $12,000 TO 15,000    1181  14.7%
 TOTAL PART-TIME UNPAID             1267    GEN INVESTIGATV    643      5                  $15,000 TO 20,000     164   2.0%
  (JULY 1,1975)        SWORN        1170    CRIME PREVENT      110      2                     OVER    20,000      31   0.4%
                     UNSWORN          97    CRIME LAB           55     38
                                            COMM REL/SERVICE    79      8    SWORN WORKING SECOND JOB           1010
 TOTAL FULL-TIME SWORN              1299    SCHOOL LIAISON      42      5                                       12.6%
  (SEPARATED FROM      DEATH          39    JUVENILE INVSC     126      3
   DEPT. DURING       RESIGN         880    COMMUNICATIONS     294    363
   FY1974-1975)       RETIRE         115    RECORDS/DATA PR    105    173    BENEFITS (FULL-TIME SWORN)      PER CENT DEP'TS
                     DISMISS         145    GEN SVC/CLERIC      68    361                                     WITH BENEFIT
                       OTHER         120    MAINTENANCE         15     55     RETIREMENT                             71.0%
                                            OTHER              107     66     LIFE INSURANCE                         63.0%
 LENGTH OF SERVICE              7506        TOTAL             8006   1390     HOSPITAL INSURANCE                     77.2%
  (FULL-TIME     UNDER 1 YR     1257  16.7%                                   ACCIDENT/DISABILITY INSURANCE          51.2%
   SWORN TO      1 TO  3 YRS    1846  24.5%  NUMBER OF RESERVE                FALSE ARREST INSURANCE                 27.2%
   JULY 1,1975)  3 TO  5 YRS    1353  17.9%   & AUXILIARY          6384       WORKMENS COMPENSATION                  94.1%
                 5 TO 10 YRS    1420  18.9%                                   HAZARDOUS DUTY PAY                      2.3%
                10 TO 15 YRS     643   8.5%                                   NIGHT DUTY PAY                          3.1%
                15 TO 25 YRS     730   9.8%                                   PAID COURT TIME                        28.9%
                25 AND OVER      281   3.7%                                   UNIFORM PURCHASE/REPLACEMENT           94.1%
                                                                              EQUIPMENT PURCHASE/REPLACEMENT         85.7%
 AGE OF FULL-TIME SWORN         7540                                          VACATION LEAVE                         96.6%
  (JULY 1,1975)  UNDER 25       1222  16.2%                                   SICK LEAVE                             89.2%
                 25 TO 30       1895  25.1%                                   OTHER                                  11.0%
                 30 TO 40       1994  26.4%
                 40 TO 50       1370  18.2%
                 50 TO 60        829  11.0%
                 60 TO 65        201   2.7%
                 OVER 65          29   0.4%


LAW ENFORCEMENT TECHNICAL DATA INSTRUMENT REPORT - PAGE 2 OF 3

FULL-TIME DISTRIBUTION                 RACE/SEX                 EDUCATION (FULL-TIME SWORN)
                                                                COMPLETED AS OF JULY 1,1975

                                             NON          NON                    SOME
                                                                        LESS             COLL
                                       WHITE WHITE WHITE WHITE          THAN  HS OR      NO                 GRAD
                           TOTALS      MALE  MALE  FEM   FEM            HS    GED        DEG   AA/AS  BA/BS DEG

 TOP ADMIN/TOP MGMT         567   6.1%  558     0     2     0            81    323      100      41     22    0
 2ND COMMAND/MID MGMT       749   8.0%  711    38     5     0            64    382      130      90     20    6
 1ST LINE SUPERVISORY      1077  11.5%  928   110     5     3            65    546      191     169     63    1
 1ST LINE LAW ENFRC/CONT   5399  57.8% 4559   632   172    44           246   3320     1046     488    217   15
 TECH & PROF CIVILIAN       464   5.0%  257    16   153    27
 OTHER CIVILIAN/SUPPORT     737   7.9%  235    44   386    72
 ALL OTHERS                 367   3.9%  193    28    72    16            25    149       33      19      6    0

      TOTALS               9340        7442   898   776   182           501   4729     1549     812    316   38
                                      79.7%  9.6%  8.3%  1.7%          6.2%  58.7%    19.2%   10.1%   3.9%  0.4%

TRAINING (FULL-TIME SWORN)   HOURS IN-SERVICE TRAINING          ENROLLED IN               1
                                0    1-16 17-39  40+             GED                      0   0.0%
 TOP ADMIN/TOP MGMT           224     38    61   194             TWO YEAR DEGREE          1 100.0%
 2ND COMMAND/MID MGMT         220     95   104   249             FOUR YEAR DEGREE         0   0.0%
 1ST LINE SUPERVISORY         245    127   128   441             GRADUATE DEGREE          0   0.0%
 1ST LINE OFFICERS           1858    604   838  1662
 ALL OTHERS                    60     30     0    80            EDUCATIONAL BENEFITS      PER CENT DEP'TS
                                                                                           WITH BENEFIT
      TOTALS                 2393    902  1131  2626             ADJUST SCHEDULES             66.0%
                                                                 TIME OFF                     51.6%
  SWORN WITH NO IN-SERVICE TRAINING WHO RECEIVED                 SUBSIDY                      36.6%
   BASIC TRAINING IN FY 1974-1975                652             INCREASE IN PAY               0.0%
                                                                 PROMOTIONS                   25.0%
POLICY
                                             PER CENT DEP'TS
                                             RESPONDING YES
 PERSONNEL CAN MOVE TO YOUR AGENCY
   WITHOUT LOSS OF RANK                          9.2%
 DEPARTMENT ANALYZE REPORTED CRIME DATA
   FOR MANPOWER ALLOCATION                      37.2%
 WRITTEN POLICIES AND PROCEDURES MANUAL         41.3%


DEPARTMENTAL ACTIVITIES

 TOTAL CALLS RECORDED JAN 74-DEC 74 1071500
 INVESTIGATIONS DURING JAN 74-DEC 74 566214
 NON TRAFFIC RELATED INVESTIGATIONS  438404
 NUMBER JUVENILE PETITIONS INITIATED  12603


TOTAL NUMBER OF JAILERS    608
           MALE JAILERS    416
                MATRONS    192
                                                                    ENTRIES OF ****S INDICATE
                                                                    'NOT ASCERTAINED'
```

C. Brief Notes on Additional Survey Instruments Developed for the North Carolina Project

During the North Carolina Project some additional instruments were developed. Some of these were used for data collection, in particular those which had been designed for use by the Juvenile Justice system, but most were not completely formulated or tested.

Some special problems were encountered in North Carolina which probably would be faced by any state undertaking a similar survey. In every state the distinct possibility exists that certain departments or segments of the criminal justice system will have developed information-gathering and retrieval systems which they will be loathe to relinquish. Some departments may have much more sophisticated automatic data processing capabilities than others, so that data could not be handled in the same manner throughout all departments. In such instances systems analysts should be consulted in an attempt to unify the entire system so that there is neither a duplication of effort nor missing data from any state-wide data collection effort.

1. Juvenile Services Questionnaires

In addition to the Law Enforcement Agency questionnaires, a set of Juvenile Services questionnaires were developed in North Carolina which were designed to cover both local and state-level agencies. These instruments were four separate, but comparable questionnaires which asked for information regarding the capacity of each of the services, the distribution and qualifications of their personnel, and the numbers of and attributes of the young offenders being assisted.

At the local level these instruments covered: 1) Juvenile Residential Care, 2) Juvenile Justice Non-Residential Services, and 3) Juvenile Detention

Centers. At the state level these instruments covered: 1) Juvenile Residential Training Schools and 2) Juvenile Probation Officers (court counselors).

The questionnaires were sent out to all such agencies within the State, so that they--like the law enforcement questionnaires--constituted a census survey of institutions offering juvenile services. (Note: It should be recalled that some questions in the Technical Data Instrument were directed to sheriffs' and police offices which contained juvenile units, so that additional information of import for planners of juvenile services was obtained through that instrument as well.)

The officials in the State Planning Office anticipated using the information gathered through these various means to form a data base, both for planning purposes and to utilize as baseline data upon which to build a yearly up-date of the information through the use of additional short forms to be distributed to the various services.

Copies of the four questionnaires can be found in Addendum C. Although these questionnaires were fielded, the shortage of funds prohibited the consultants from being able to analyze the returned data, as well as being unable to evaluate the success or lack of success of the undertaking.

2. State-Level Law Enforcement Agency Questionnaire

With the aim of completing a comprehensive survey of all law enforcement agencies within the State of North Carolina, a modified version of the Technical Data Instrument was developed which was sent to State-level agencies. These agencies included such large organizations as the State Highway Patrol, as well as the small law enforcement units within the Department of Wildlife and Fisheries, Alcohol Beverage Control, etc.

Although the consultants assisted planners in modifying the Technical Data Instrument to develop the State Agency Questionnaire, the returned data were handled directly by the State, so there was no basis for external judgement of the success of this portion of the project. The instrument appears in draft form in Addendum D.

3. Adult Corrections Questionnaire

In North Carolina the Department of Corrections maintains, at the state level, a computerized information system which incorporates some, although not all, of the information which would make the data comparable to that collected for the law enforcement agencies. Specifically, much of the information is collected and aggregated at a level above the unit (institutional) level. During the course of the North Carolina project, the consultants, in conjunction with state planning officials drafted an instrument which was a modification of the Law Enforcement Technical Data Instrument with a view toward collecting data at the institutional level. The instrument remained in draft form, however (see Addendum E), and was not used within the State as the Department of Corrections felt its own purposes were adequately served by the existing system.

Any state which contemplates a state-wide data-collection effort of all law enforcement and criminal justice agencies should be cautioned to ensure that data is collected at an equivalent level throughout the system if it intends to analyze data across departments. It will be necessary for designers of any state-wide survey to define clearly what is meant by agency or unit level throughout the entire system. As was indicated earlier in this manual, once data are collected, they can be aggregated at any level above the unit from which they were collected. At the same time they cannot be disaggregated below that level.

4. The Court

No survey of the courts in North Carolina was contemplated as the unified system was to be surveyed in its entirety through the National Manpower Survey.

5. Employees' Survey

An employees' survey was anticipated as part of the North Carolina project to obtain the type of information (individual characteristics, educational background, work history, etc.) which--as has been mentioned before in this manual--is best collected at the individual level, but which may later be aggregated at any level desired. Several meetings were held to discuss this survey, including a meeting with staff members from the Criminal Justice Training and Standards Council, with a view to developing a questionnaire which could be distributed on a periodic basis to randomly-drawn samples of employees throughout the criminal justice system. However, funding was eliminated before even a rough draft of such an instrument could be developed.

A list of possible items for an employees' survey which had been suggested by the staff of the National Manpower Survey is included in Addendum E.

ADDENDUM A

List of Coverage Items Desired by North Carolina Planning Staff for Inclusion in the Survey.

Suggested List of Items Presented by the National Planning Association.

Questionnaire Used by North Carolina in 1974.

Form Developed by the State Planning Office for Inclusion in the North Carolina Data Book.

NER North Carolina Department of
Natural & Economic Resources

JAMES E. HOLSHOUSER, JR., GOVERNOR • JAMES E. HARRINGTON, SECRETARY

P.O. BOX 27687
RALEIGH 27611
TELEPHONE [illegible]

July 30, 1975

TO: Planning Staff

FROM: Joe Auton

THROUGH: Gordon Smith G.

In the development of pertinent data for the National Manpower Survey (in conjunction with Gloria Hamilton of B. S. S. R.) the following list of needed items may be followed in working with state agencies. These "coverage items" in concert with some of the charts of the T.D.I. should give us all the information we need.

JA/GS/cmm

VT-251

1. Number of persons employed by type of position.
2. Educational levels of justice personnel by type of position.
3. Training levels of criminal justice personnel by type of position.
4. Minimum entry level requirements in terms of education, experience, or training by type of position.
5. Length of service by position type.
6. Salaries by position type.
7. Ethnic composition by position type.
8. Age characteristics by position type.
9. Turnover rates by position type (if possible).
10. Description of current personnel policies relative to recruitment, selection promotion, incentive and retention programs.
11. Current workload -
    a. Ratio of practitioners to total population served.
    b. Ratio of practitioners to offender population served.
12. Description of manpower functions by position type. (This will likely be done by employee surveys.)

SUGGESTED DATA ITEMS - AGENCY LEVEL

A. Entry Requirements

1. physical (police and corrections)
2. age - minimum, maximum (police and corrections)
3. education (police and corrections)
4. experience (only where applicable)

B. Civil Service (for police and corrections and other sectors where applicable)

1. date of last exam
2. number taking last exam
3. number qualified for employment
4. number selected from those qualified

C. Promotion Policy

1. mandatory education requirements
2. promotion experience requirements

D. Compensation

1. salary-starting-maximum
2. presence of benefits (checklist)
3. dollar pay incentive for advanced education

D. Retirement

1. minimum retirement age - minimum years of service
2. mandatory retirement age
3. portable Y-N
4. vesting Y-N

E. Employment

1. fulltime employment (1970-74) by some occupational grouping more detailed than sworn, non-sworn
2. anticipated employment for selected occupational groupings
3. current employment (fulltime - parttime) by exec. survey occupations
4. volunteers (important in corrections more than other sectors)

F. Vacancies, Accessions and Turnover

1. current vacancies by selected occupational groupings
2. total accessions 1970-75 for selected occupational groupings
3. lateral entry - whether permitted

4. number of accessions through lateral entry
5. total separations for selected occupation grouping (1970-75)
6. separations by death, disability, retirement (1970-75) for selected occupation grouping
7. voluntary resignation (1970-75) for selected occupation grouping

G. Union Status

1. existence of collective bargaining relationship
2. scope of collective bargaining

H. Agency Structure

1. functions
2. workload
3. career ladder for sworn police and correctional officers (may be more appropriately obtained from tabulating individual responses)

I. Budget

1. total expenditure budgeted 1970-76
2. source of funds
3. current personnel expenditure
4. current capital outlay
5. training expenditure

J. Minority and Women Recruitment (can meaningful questions be asked without affecting response rates)

K. Training for New Personnel

1. whether provided
2. when it occurs
3. length

L. In-Service Training

1. is it required
2. is it offered
3. number who receive
4. frequency
5. provider

M. Number In-House Training Staff

N. Reimbursement for Education Expenses

O. Selected Policy Questions

Agency Level Data Items - Police

A. Workload Items

1. number of calls for service
2. offense rate part I, part II
3. number of investigation (non-traffic)
4. total arrests

B. Policy Items

1. deployment policy
   a. number of 1-man vehicle, 2-man vehicle, foot patrol in the course of a week
   b. change in patterns of deployment - direction

2. existence of specially-trained units for
   a. family or crisis intervention
   b. juvenile-related duties
   c. riot or crowd control

JAMES H. CARSON, JR.,
ATTORNEY GENERAL

State of North Carolina

JOHN FAIRCLOTH
DIRECTOR

Criminal Justice Training and Standards Council

Department of Justice
P. O. BOX 140
RALEIGH
27602

October 7, 1974

MEMORANDUM

TO: All North Carolina Chiefs and Sheriffs

FROM: John Faircloth, Director John Faircloth

SUBJECT: Law Enforcement Information Study

In the past, many State agencies have duplicated their efforts attempting to gather information concerning law enforcement. In order to provide more comprehensive and farreaching assistance to you and your department, the following agencies are coordinating their efforts: The Criminal Justice Training and Standards Council, The Governor's Committee on Law and Order, The Criminal Justice Education and Training System, and The National Advisory Commission on Criminal Justice Standards and Goals Study for North Carolina. The following questionnaire has been developed through this joint effort to eliminate any duplication of your time and energy.

We have divided our questions into two sections, An Executive Opinion Questionnaire and a Technical Data Questionnaire. We would like for you to fill out the first section, (The Executive Opinion Questionnaire) and return it to us within five (5) working days. We will use the information from that to help us better ascertain in which areas you feel our respective agencies should be working. If there are some programs which we could develope that you feel would be particularly important, please indicate that on this questionnaire.

The second section requests technical data. We would appreciate it if you or a representative of your office could fill out the second section of this instrument and return it to us within fifteen (15) working days.

We are planning to use the information from this to compile a manual which will contain a brief summary of all the law enforcement departments in the State. We are expecting to be able to provide you with a copy of this manual by March, 1975. This manual will contain information on recruitment, training, salaries, and promotion of law enforcement officers in each individual department.

It will also contain budgetary comparisons for like-sized departments. We are asking your assistance so we can be certain that our information is as accurate and as current as possible. In providing you with this manual, we are hoping to give you a valid means of comparing different practices within the various departments and a more firm basis from which to justify the various budget requests you might have in the future.

If you have any questions on the type of information being requested,please feel free to contact us. Thank you very much for taking the time and effort to complete these forms.

JF/MLL/jn

Attachments

NER North Carolina Department of
Natural & Economic Resources
JAMES E. HOLSHOUSER, JR., GOVERNOR • JAMES E. HARRINGTON, SECRETARY

P.O. Box [illegible]
RALEIGH [illegible]
TELEPHONE [illegible]

October 7, 1974

MEMORANDUM

TO: All North Carolina Chiefs and Sheriffs

FROM: Donald R. Nichols, Administrator
DIVISION OF LAW AND ORDER

SUBJECT: Development of the Annual Law Enforcement Data Manual

The technical data instrument has been been developed to provide information which will be included in The Law Enforcement Data Manual. This manual has been developed for two purposes These are:

(1) To provide chiefs and sheriffs, city and county managers and city and county elected officials with data on all law enforcement agencies in the state. Particularly it is important to provide the averages for various pieces of data for like-size police departments, and separately the same data for like-size sheriff departments. This data manual will be made available in March,1975 for your use in comparing your law enforcement agency with similar sized departments. This comparison of data should provide support for your budget requests to the city or county for the coming year where you can show that your agency is below the average for like-sizes departments.

(2) To provide statewide data on criminal justice agencies, and to assure coordination between the state agencies that are serving you, to the degree that the three agencies involved do not send you three separate questionnaires with differently worded, yet similar questions. This data will be used for planning purposes for the three participating agencies.

For your information, we have specifically excluded questions such as population served, or area covered, which we can get from other sources. However, we will include police/population ratios, etc., in the Data Manual. Also, if there is additional data analysis you may wish beyond that included in the Data Manual, we will be glad to supply such analysis as our budget will allow, depending on the number of requests we receive for such service.

As this is the first time we have developed a coordinated approach to data collection, it would be foolish to assure that the data instrument is perfect, or in fact, can ever be perfect when trying to coordinate data collection for so many different sized departments. Nevertheless, the questions have been closely reviewed, pre-tested, and reviewed again. However, we are sure that the instrument can be improved, and will request each regional criminal justice policy board to review the data instrument and the Data Manual in May and June, 1975, and to make recommendations for their improvement and future use.

We hope that you will find our orientation for developing common data which will be

made available to you and government officials in your city or county useful.

If you have any questions regarding the items on the questionnaires, please contact your regional planning director. He is familiar with both of these instruments, and will be glad to help you in any way he can.

In ending, I do wish to ask that you respond to both questionnaires within the requested time, so that the Data Manual can be published in February, 1975, and then be made available in March to you for providing support for various parts of your next budget requests to the city or county officials. Your response is most important.

THANK YOU FOR YOUR ASSISTANCE.

DRN/OS/bw

General Court of Justice
12th Judicial District

E. MAURICE BRASWELL
SENIOR RESIDENT SUPERIOR COURT JUDGE
COY E. BREWER
RESIDENT SUPERIOR COURT JUDGE

DISTRICT COURT JUDGES
DERB S. CARTER, CHIEF
JOE DUPREE
D. B. HERRING, JR.
SEAVY A. CARROLL

October 7, 1974

Dear Chiefs or Sheriff:

Through a cooperative sharing of effort the North Carolina Justice Academy at Salemburg will share in the results of the information given by you in the questionnaire of the Criminal Justice Training and Standards Council.

I would urge your best effort in seeing that the various questions are answered fully. It will greatly aid in making an effective evaluation of our entire criminal justice delivery system.

Sincerely,

E. Maurice Braswell

E. MAURICE BRASWELL
Chairman of the Board,
North Carolina Justice Academy

EMB:am

LAW ENFORCEMENT EXECUTIVE OPINION QUESTIONNAIRE

INDIVIDUAL RESPONSES GIVEN TO THE EXECUTIVE OPINION ARE CONFIDENTIAL. ONLY TOTAL RESPONSES FROM THE EXECUTIVE OPINION QUESTIONNAIRE WILL BE MADE AVAILABLE, AND ARE AVAILABLE ON REQUEST FROM THE DIVISION OF LAW AND ORDER.

PLEASE RETURN THE EXECUTIVE OPINION QUESTIONNAIRE WITHIN FIVE (5) WORKING DAYS OF DEPARTMENT RECEIPT OF THE QUESTIONNAIRE. A SELF-ADDRESSED ENVELOPE IS INCLUDED FOR RETURNING THE QUESTIONNAIRE. PLEASE DISREGARD THE CODES FOR EACH QUESTION. THEY HAVE BEEN PUT IN ONLY TO FACILITATE QUICK DATE PROCESSING AND COMPUTER TABULATION OF ANSWERS.

(1) Do you believe the Law Enforcement Data Manual, which will show the averages of data for like-sized sheriff departments, and will also show separetely the averages of data for like-sized police departments, can be a useful planning resource for development of budget requests to your city or county officials? (Check one)

AA18
(1) ____________ Yes, it will be useful
(2) ____________ No, it will not be useful

(2) Consideration is being given to offering a basic and refresher training program in property crime prevention similar to the program offered at the National Crime Prevention Institute in Kentucky. This will be available at no cost to your department. If such a program is offered, would you be interested in sending one or more officers?

AA19
(1) ________ Yes
(2) ________ No

If yes, please estimate the number of officers by the time period included below.

Date	Code	Basic	Code	Refresher
February or March, 1975	AA20		AA23	
July or August, 1975	AA26		AA29	

Would you be interested in attending a one night-two day seminar on property crime prevention in February, 1975, held specifically for chiefs and sheriffs?

AA32
(1) ________ Yes
(2) ________ No

(3) Consideration is being given to sponsoring a statewide crime prevention public education program similar to the "Help Stop Crime" Program in Florida. This program includes maintenance of regular television and radio public information bulletins on how to reduce the likelihood of being a victim of crime, as well as the provision of public education material on crime prevention to come from each participating law enforcement agency in the state. How do you fell about the development of such a program for North Carolina?

AA33
(1) __________ Strongly Favor
(2) __________ Favor
(3) __________ Neutral
(4) __________ Oppose
(5) __________ Strongly Oppose

Have you previously known of the Florida "Help Stop Crime" Program?

AA34
(1) ______ Yes
(2) ______ No

(4) There is an opinion that one reason the reported national crime rate continues to increase is due to the lack of a complete criminal justice information system. Therefore, there has been and will continue to be for several years a rapid development of criminal justice information systems in each state. This in and of itself will cause the reported FBI crime statistics to increase faster than otherwise would because it will introduce more accurate and uniform reporting techniques. How do you feel about this opinion?

AA35
(1) __________ Strongly Agree
(2) __________ Agree
(3) __________ Neutral
(4) __________ Disagree
(5) __________ Strongly Disagree

(5) Do you believe the criminal justice system in North Carolina can best be improved by first emphasizing? (Check one)

AA36
(1) ____ Development of Present Personnel through Improved Training and Salaries; or
(2) ____ Expansion of Existing Personnel without First Emphasis on Training and Salaries.
(3) ____ Neither of the above.

(6) The Committee on Law and Order sets its priorities each year to meet the goals of improving the criminal justice system and reducing the incidence of crime. To assist the Committee in the future, please review the criminal justice service components listed below and give your opinion as to how each ranks for improvement needed to meet the Committee's goals. (Rank from 1 to 4, with 1 for greatest improvement needed.

CODE	RANK	CRIMINAL JUSTICE SERVICE COMPONENTS
AA37		Adult Correction Services
AA38		Court Services
AA39		Juvenile Justice Services
AA40		Law Enforcement Services

(7) Following is a list of law enforcement program areas. Please rank them in order of importance for your department's needs. Rank only those areas of need for new funds next year, with 1 for most important.

CODE	RANK	LAW ENFORCEMENT PROGRAM AREA
AA42		Additional Personnel (General Patrol)
AA44		Community Services Officers & Units
AA46		Dispatchers
AA48		Equipment and Facilities
AA50		Family Crisis Officers and Units
AA52		Forensic Services
AA54		Investigative Officers and Units
AA56		Jail Personnel
AA58		Juvenile Officers and Units
AA60		Organized Crime Program
AA62		Planning Officers and Units
AA64		Police Legal Advisors
AA66		Property Crime Prevention Officers and Units
AA68		Public Education Programs
AA70		Radio Communications Equipment
AA72		Records Clerks
AA74		Recruitment Programs
AA76		Resource Management Programs
AA78		Salary Incentive and Retention
AA80		Training and Education Programs

VI-259

(8) The Justice Academy* at Salemburg is considering offering the following courses. First, indicate whether you think the following courses should be offered at Salemburg, then, please rank those courses in order of the importance to the training needs of your department, with one (1) being the most important.

Possible Courses	Code	Yes, Be (2) Offered	No, Not Be (2) Offered	Code	Priority For Those Offered
Administrative & Management	BB13			BB14	
Collection & Preservation of Evidence	BB16			BB17	
Command & Supervisory	BB19			BB20	
Court Decisions	BB22			BB23	

(Continued on Next Page)

* Also known as the Criminal Justice Training Academy.

Possible Courses	Code	Yes	No	Code	Priority
Crime Prevention	BB25			BB26	
Crime Scene Search	BB28			BB29	
Family Crisis	BB31			BB32	
Fingerprinting	BB34			BB35	
Investigative Techniques	BB37			BB38	
Juvenile Problems	BB40			BB41	
Narcotics	BB43			BB44	
Police-Community Relations	BB46			BB47	
Search & Seizure	BB49			BB50	
Traffic	BB52			BB53	
Others	BB55			BB56	

If yes, check for others listed above, please specific courses, and rank their priority with those above.

(9) When training is made available at the Justice Academy at Salemburg, how many officers would you send for training from your agency in a one year period?

Administrative - Chiefs, Sheriffs, Assistant Chiefs, Chief Deputy, Administrative Assistants, etc.
Command - usually Majors, Captains, Lieutenants, etc.
Supervisory - usually Sergeants, Corporals, etc.
Special Units - Detectives, Investigators, Crime Lab, Narcotics, Vice, Juvenile, Training (other than Command, Supervisory Positions)
General Patrol - Patrolmen, Deputy, etc.

Position Categories	Code	Number of Officers	Code	Preferred Length of Training Time in Days
Administrative	BB58		BB61	
Command	BB64		BB67	
Supervisory	BB70		BB73	
Special Units	CC10		CC13	
General Patrol	CC16		CC19	

(10) From your professional experience in law enforcement, please rank the following factors in order of importance for reducing the reported crime rate.

Code	Rank	Factors in Reducing Crime Rate
CC22		Increased Employment
CC23		A stable or decreasing population between ages of 16-24
CC24		Development of an accurate criminal justice information reporting system
CC25		Increased confidence in government and its services
CC26		An improved criminal justice system
CC27		An improved social service system
CC28		Other (Please specify)

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(11) Do you favor law enforcement agencies utilizing a policy under which qualified personnel can move from another law enforcement agency to yours without loss of rank?

CC29
(1) ________ Yes
(2) ________ NO

(12) Please estimate the average number of minutes per felony case which the District Attorney and/or his Assistants spends with the appropriate law enforcement officers at the following points in a case:

Activity	Code	Estimate Average No. of Minutes Per Felony Case
Before charges are filed	CC30	
Between charge & beginning of trial	CC33	
Reviewing case after the trial	CC36	

(13) Please estimate the average annual number of hours spent by general patrol and special unit officers of your department in court?

CC39 ________ Estimated average annual number of hours per officer in court.

(14) What do you consider the major problem area in the relationship between the law enforcement officers of your department and the District Attorney's office?

____
____
____
____
____
____

(15) Do you believe the Minimum Salary Program should be continued?

CC42
(1) ____ Strongly Favor
(2) ____ Favor
(3) ____ Neutral
(4) ____ Oppose
(5) ____ Strongly Oppose

Presently, the minimum salary is $6,000. Do you believe the minimum should be increased?

CC43
(1) ____ Yes
(2) ____ NO

If yes to the previous question please check from the salary amounts listed below what you felt as the most appropriate minimum salary for all law enforcement officers in the State.

CC44
(1) ________ $6,500
(2) ________ $7,000
(3) ________ $7,500
(4) ________ $8,000
(5) ________ $8,500

There is opinion that the Minimum Salary Program should be developed into a salary incentive program to encourage further training and/or education of law enforcement officers. How do you feel about this proposal?

CC45
(1) ________ Strongly Favor
(2) ________ Favor
(3) ________ Neutral
(4) ________ Oppose
(5) ________ Strongly Oppose

There is opinion that the Minimum Salary Program should be continued, but changed to require the county or city government to pay the full minimum salary to its officers after a given period of time; how do you feel about this proposal?

CC46
(1) ________ Strongly Favor
(2) ________ Favor
(3) ________ Neutral
(4) ________ Oppose
(5) ________ Strongly Oppose

If cities and counties are required to assume the Minimum Salary Costs after a given period of time, what do you think that period should be? (Check one)

CC47
(1) ________ 1 year
(2) ________ 2 years
(3) ________ 3 years
(4) ________ 4 years
(5) ________ 5 years or more

(16) Who have you assigned responsibility for answering the Technical Date Instrement?

________________ Name
________________ Position
________________ Phone Number

________________ SIGNATURE OF CHIEF OR SHERIFF
________________ CITY OR COUNTY SERVED

THANK YOU FOR YOUR ASSISTANCE!

LAW ENFORCEMENT TECHNICAL DATA INSTRUMENT

PLEASE RETURN THIS DATA INSTRUMENT WITHIN 15 (FIFTEEN) WORKING DAYS DEPARTMENT RECEIPT.

PLEASE FILL IN THE FOLLOWING:

NAME OF DEPARTMENT: ____________________

REGION: ____________ COUNTY: ________________ CITY: ____________________ .

GENERAL DIRECTIONS:

1. This data instrument has been designed with the intent of compiling information essential for strengthening local law enforcement in North Carolina, including information about salaries, fringe benefits, manpower strength, special units, records, etc., and will be the data included in The Law Enforcement Data Manual.

2. This questionnaire has been designed for FAST COMPLETION. Wherever possible, spaces for checks have been provided. All questions can be answered by:

   a) Marking an "X" in a space (eg. X,)
   b) Writing a number on a line (eg. 15, or)
   c) Marking a code:
      (0 for None, or Not Applicable)
      (DK for Don't Know or Information Not Available - this means that the information is either not known or that it is not available.)

3. Please answer every question. If an item is really not available or does not exist, you should reply with one of the codes listed in 2-c above. THERE SHOULD BE NO BLANKS LEFT FOR ANY QUESTION.

4. If you do not understand what a question means, or you do not know how to answer it, please call your regional planning director or Larry Koonts at the Division of Law and Order. (829-7974)

5. Please answer questions carefully. Your response will be considered an official report of your police or sheriff department.

6. Please disregard all code numbers such as A18, (B38), etc. These are included only to facilitate data processing for computerization of data.

☐☐☐☐☐☐☐	☐☐☐☐☐☐
NCIC NUMBER	REG COUNTY CITY

LAW ENFORCEMENT TECHNICAL DATA INSTRUMENT

(1) What is the total current budget for FY 1974-75 (July 1, 1974-June 30, 1975)?

Grand Total City or County Budget	Total Budget for your Department	Total Budget for Personnel in your Department
A18	A26	A34
$	$	$

(2) What is the total number of full-time personnel positions that were authorized in your department budget in the following designated years?

Personnel Positions	FY 1971-72		FY 1972-73		FY 1973-74		FY 1974-75	
Sworn Positions	A42		A46		A54		A60	
Unsworn Positions	A45		A51		A57		A63	

(3) How many new full-time positions do you realistically anticipate will be officially authorized for your department in the following periods?

Anticipated Positions	FY 1975-76		FY 1976-77	
Sworn Positions	A66		A70	
Unsworn Positions	A68		A72	

(4) How many full-time sworn personnel were separated by death, resignation, retirement, or discharge during each of the following years?

	FY 1971-72		FY 1972-73		FY 1973-74	
Sworn Positions	A74		A76		A78	

(5) What is the total number of sworn part-time personnel positions in your department including reserves?

B10		Number Part-Time Paid

B12		Number Part-Time Unpaid

(6) Give the length of law enforcement service of full-time sworn personnel in your department. Indicate the number of officers within each of the following service ranges as a July 1, 1974:

Length of Service	Code	Number of Personnel
1 day - 6 months	B14	
7 months - 11 months	B17	
1 - 2 years	B20	
3 - 5 years	B23	
6 - 10 years	B26	
11 - 15 years	B29	
16 - 25 years	B32	
over 25 years	B35	

(7) Please give the number of full-time sworn personnel in your department whose age is within the following ranges as of July 1, 1974.

Age	Code	Number
20 - 24 years old	B38	
25 - 29 " "	B41	
30 - 39 " "	B44	
40 - 49 " "	B47	
50 - 59 " "	B50	
60 - 65 " "	B53	
over 65 " "	B56	

(8) How is your actual total full-time sworn personnel distributed into the following position categories?

Administrative - Chief, Sheriff, Assistant Chiefs, Chief Deputy, Administrative Assistants, etc.
Command - usually Majors, Captains, Lieutenants, etc.
Supervisory - usually Sergeants, Corporals, etc.
Special Units - Detectives, Investigators, Crime Lab, Narcotics, Vice, Juvenile, Training, (other than Command, Supervisory Positions)
General Patrol - Patrolman, Deputy, etc.
Support Personnel - Jailors, Bailiffs, Records, Communications, etc.

Position Category	Code	Number	Code	Approximate Average Annual Salary	Code	Average No. Duty Hours Scheduled Per Week
Administrative	B59		B62		B67	
Command	B69		B72		C10	
Supervisory	C12		C15		C20	
Special Units	C22		C25		C30	
General Patrol	C32		C35		C40	
Support Personnel	C42		C45		C50	

(9) Estimate the number of officers in your department who routinely work a second job?

C52		Number of Officers

(10) What is the annual salary range of the positions categories, as defined in question 8, low to high?

Position Category	Code	Lowest Salary	Code	Highest Salary
Administrative	C55	From $	C60	To $
Command	C65	From $	C70	To $
Supervisory	C75	From $	D10	To $
Special Units	D15	From $	D20	To $
General Patrol	D25	From $	D30	To $
Support Personnel	D15	From $	D40	To $

(11) What are the number of full-time personnel, both sworn or unsworn, in the department as distributed within the following sex and race categories?

Position Category	Code	Male White	Code	Male Non-White	Code	Female White	Code Code	Female Non-White
Administrative	E15		E48		E51		E54	
Command	E57		E60		E63		E66	
Supervisory	E69		E72		E75		E10	
Special Units	E13		E16		E19		E21	
General Patrol	E24		E27		E30		E33	
Support Personnel	E36		E39		E42		E45	

(12) How many of the vehicles listed below does your department currently have? (This should not include privately owned cars).

Description	Code	Number
Automobiles	E48	
Motorcycles	E50	
Mobile Crime Labs	553	
Crime Prevention Display Vans	E56	

(13) Give the number of full-time personnel assigned specifically to duty performance in the following functional areas. (List only those who spend more than half their time in these functions - Do not count an individual more than once.)

FUNCTIONAL AREAS	NUMBER OF OFFICERS			
	Code	Sworn	Code	Unsworn
Traffic	E58		E62	
General Patrol	E64		E67	
Detective	E69		E72	
Records	E74		F10	
Communications	F12		F15	
Juvenile	F17		F20	
Planning & Research	F22		F25	
Training	F27		F30	
Personnel	F32		F35	
Crime Laboratory	F37		F40	
Internal Affairs/Inspection	F42		F45	
Intelligence	F47		F50	
Vice	F52		F55	
Bomb & Dangerous Devices	F57		F60	
Drugs	F62		F65	
Community Relations	F67		F70	
Jail	F72		F75	
Organized Crime	G10		G13	
Legal Advisor	G15		G18	
Crime Prevention	G20		G23	
Family Crisis/Domestic Relations	G25		G28	
Police Cadet	G30		G32	
Reserve/Auxiliary Unit	G34		G37	

(14) Indicate whether the department provides any of the following benefits to personnel, and if so, to what extent. (Check one per line.)

Benefits	Code	0 None	1 Partial	2 Total
Retirement	G39			
Life Insurance	G40			
Accident/Disability Insurance	G41			
False Arrest Insurance	G42			
Hospital Insurance	G43			
Workmens Compensation	G44			
Hazardous Duty Pay	G45			
Night Duty Pay	G46			
Paid Court Time	G47			
Shift Differential Pay	G48			
Uniform Purchase/Replacement	G49			
Equipment	G50			
Vacation Leave	G51			
Sick Leave	G52			
Time Off for Educational Advancement	G53			
Other (Please Specify)	G54			

(15) How many full-time sworn personnel in your department have completed the following levels of education?

Position Categories	Code	Less Than High School or GED	Code	High School or GED	Code	One Year Coll	Code	Two Yrs. Coll	Code	Three yrs. Coll.	Code	Four Yrs. Coll. More
Administrative	G55		G58		G61		G64		G67		G70	
Command	G73		G76		H10		H13		H16		H19	
Supervisory	H22		H25		H28		H31		H34		H37	
Special Units	H40		H43		H46		H49		H52		H55	
General Patrol	H58		H61		H64		H67		H70		H73	
Support Person.	H76		I10		I13		I16		I19		I22	

(16) How many officers in the department are now enrolled in an education or college program?

Position Levels	Code	GED	Code	Two Year Degree	Code	Four Year Degree
Administrative	I25		I27		I29	
Command	I31		I33		I35	
Supervisory	I37		I39		I41	
Special Units	I43		I45		I47	
General Patrol	I49		I51		I53	
Support Personnel	I55		I57		I59	

(17) Indicate the number of officers presently enrolled in college who receive financial support from the following sources: (see next page)

Code	Number of Officers	Sources of Financial Support
J61		VA
J63		LEEP (Law Enforcement Education Program)
J65		City or County Expense
J67		Individual Expense or Loan
J69		College Scholarship
J71		Other (Specify)
J73		Information Not Readily Available on Remaining Officers Enrolled in College
J75		Regional L & O Training Project

(18) If tuition, fees and books were paid for, estimate how many of your officers not now enrolled in college would attend and continue their education?

Code	Number of Officers
J10	

(19) Does your department provide any salary supplement or educational incentive benefits to personnel for academic achievement?

J12
(1) _____ Yes
(2) _____ No

If yes, please specify. ______________________________

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(20) Give the number of full-time, sworn officers with more than 1 year of service in your department who received classroom in-service training (other than the 160 hours basic) in the last fiscal year - July 1, 1973 to June 30, 1974.

Position Category	Code	0 Hours	Code	1- 24 Hours	Code	25-39 Hours	Code	40 Hours	Code	More Than 40 Hours
Administrative	J16		J19		J22		J25		J28	
Command	J31		J34		J37		J40		J43	
Supervisory	J46		J49		J52		J55		J58	
Special Units	J61		J64		J67		J70		J73	
General Patrol	K10		K13		K16		K19		K22	
Support Personnel	K25		K28		K31		K34		K37	

(21) In the past fiscal year how many officers in your department participated in classroom training out-of-state? (see next page)

Code	Number of Men	Place of Out-of-State Training
K40		FBI Academy
K43		National Crime Prevention Institute
K46		Northwestern University Traffic Institute
K49		Hazardous Devices
K52		Southern Police Institute
K55		Drug Enforcement Administration (Old BNDD)
K58		All other

(22) Does your department utilize a policy under which personnel can move from another law enforcement agency to yours without loss of rank?

K61
(1) _____ Yes
(2) _____ No

(23) Indicate who has primary responsibility for recruitment of new personnel for your department. (Answer only once)

Primary Recruitment Responsibility	K62	Check one
Civil Service Commission	(1)	
City or County Personnel Office	(2)	
City or County Manager	(3)	
Chief or Sheriff	(4)	
Department Personnel Office	(5)	

(24) What methods are used for recruitment?

Methods	Code	Yes (1)	No (2)
Radio or TV ads	K63		
Newspaper or Magazine ads	K64		
Brochures	K65		
Posters or Billboards	K66		
Military Contacts	K67		
Employment Agency	K68		
Mobile Recruit Unit	K69		
Personnel Recommendation	K70		
Other (Specify)	K71		

(25) Does your department use any of the following entry requirements for sworn personnel?

Entry Requirements	Code	Yes (1)	No (2)	If Yes Specify Requirement
Age (over age 20)	L10			
Height	L11			
Weight	L12			
Eyesight	L13			
Written Test (other than KSC Test)	L14			
Psychological Exam	L15			
Polygraph	L16			
Other ______	L17			

(26) How many investigations did your department conduct from July 1, 1973 through June 30, 1974?

Code	Number of Investigations
[illegible]	

Of these investigations, how many were not traffic related?

Code	Number of Non-Traffic Related Investigations
[illegible]	

How many arrests resulted from non-traffic related investigations during the same period?

Code	Number of Arrests from Non-Traffic Related Investigations
[illegible]	

Of the number of arrests from non-traffic related investigations, how many resulted in the following actions taken (as best you can determine from available records):

Code	Number Actions	Actions Occurring
[illegible]		Conviction as charged
[illegible]		Conviction for lesser offense than charged
[illegible]		No prosecution (nol pros)
[illegible]		Acquittal

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(27) How many juvenile petitions were initiated by the department from January 1, 1973 through December 31, 1973?

Code	Number of Juvenile Petitions Initiated
[illegible]	

(28) List the number of the following equipment and/or facilities that your department has access to, if any. If none, write 0.

Description	Code	Number
Mug Cameras	M10	
Polaroid Cameras	M12	
35 mm Cameras	M14	
4 x 5 Cameras	M16	
Fingerprinting Kits	M18	
Drug Analysis Kit	M20	
Dark Room: Black & White	M22	
Dark Room: Color	M24	

(29) Please indicate whether your department utilizes the services of a crime laboratory? If yes, estimate the average turn around time from date of request to date of receipt of information. (See next page)

Code	Agency	Yes (1)	No (2)		Code	Days
M26	FBI			Average turn around (days)	M27	
M30	SBI			" " " "	M31	
M34	Charlotte			" " " "	M35	
M38	Own Lab			" " " "	M39	
M42	Other			" " " "	M43	

If other, please specify ______________________

(30) Does your department use written citations in lieu of physical arrest?

[illegible]
(1) ________ Yes
(2) ________ No

If yes, in approximately what percent of the non-traffic cases do you use written citations in lieu of physical arrest (indicate nearest percent)?

M47	%

(31) What hours of the day and week is your department headquarters regularly open to the public (not on-duty call)? (Check one)

M49
(1) ________ Provide 24-hours 7 day service
(2) ________ Not open for 24-hours 7 day service, but open with the following regular service:

Hours: ______________ through ______________
Days: ______________ through ______________

(32) Does your department have access to a copy machine 24-hours a day, 7 days a week?

M50
(1) ________ Yes
(2) ________ No

(33) Do your patrol officers conduct preliminary investigations of criminal offenses? (Check one)

M51
(1) ________ Regularly
(2) ________ Sometimes
(3) ________ Rarely
(4) Never

(34) Do you have a formalized system for the storage, classification, retrieval, and disposition of items of evidence and other value that comes into the custody of your department?

M52
(1) ______ Yes
(2) ______ No

(35) Has your department developed written short- and long-range goals to guide agency functions?

M53
(1) ______ Yes
(2) ______ No

(36) Does your department conduct regularly scheduled and/or unscheduled inspections of the following? (Check one per line):

	Code	No	Yes/Scheduled	Yes/Unscheduled
Personnel	M54			
Equipment	M55			
Operations	m56			

If regularly scheduled for personnel, how often?

M57
(1) ______ Daily
(2) ______ Weekly
(3) ______ Monthly
(4) ______ Annually

(37) Has your department adopted the concept of team policing; that is, the permanent 24-hour assignment of groups of police officers to a specific geographic part of your community?

M58
(1) ______ Yes
(2) ______ No

If no, is the department considering the use of team policing in the next two years?

M59
(1) ______ Yes
(2) ______ No

(38) Does your department have a formal, written policies and procedures manual?

M60
(1) ______ Yes
(2) ______ No

If yes, are the following included.

Question	Code	Yes (1)	No (2)	In Process* (3)
Written policy regarding limits of authority, use of reasonable force when necessary, and procedures for receiving commendations and complaints from the public regarding individual officer performance?	M61			
Policy regarding the limits of discretion exercised by the department and by individual officers in the performance of their duty?	M62			
Policies and procedures which provide for effective communication with the public through agency employees?	M63			
Written policy defining the police role in your community?	M64			
Written policy statement regarding department relationship with the news media?	M65			
Written policy regarding the diversion, where appropriate, of individuals from the criminal and juvenile justice system? (i.e., alcoholics, mentally ill)	M66			
Written policy regarding criteria for salary increases	M67			
Written policy regarding the follow-up on the disposition of criminal cases initiated by the department?	M68			
Written policy regarding command and control plans to activate the resources of the department rapidly to control any usual occurence (i.e., natural disaster or civil disorder) that may occur within your jurisdiction?	M69			
Written policy regarding a system for the arrest, processing, transportation, and detention of a large number of persons?	M70			
Written policy regarding a systematic procedure for the deployment of patrol officers according to seasonal, daily, and hourly variations?	M71			
Written policy regarding the handling of juvenile offenders?	M72			
Written policy regarding working relationships with medical, business, educational, behavioral science, and religious professionals?	M73			

* In Process of Developing

(39) If your department has a policies and procedures manual, to whom is it distributed?

Code	Yes (1)	No (2)	
[illegible]			Administrative Personnel
[illegible]			Command Personnel
[illegible]			Supervisory Personnel
[illegible]			Patrol & Other Personnel
[illegible]			News Media on Request
[illegible]			General Public on Request

(40) If a training session were offered at the Justice Academy or elsewhere to teach officers how to develop a policies and procedures manual, would your department want to send a representative?

H10
(1) ______ Yes
(2) ______ No

(41) Who prepares the budget request for your department which is submitted to the city or county elected officials?

H11
(1) ________ Mayor or Chairman of County Commissioners
(2) ________ City or County Manager
(3) ________ City or County Financial Officer
(4) ________ Departmental Financial Officer

(42) How many individuals appointed by your agency as reserve officers after March 15, 1973, have since been employed as full-time sworn officers?

Code	Number of Officers
H12	

(43) Do you have, or will you need, the following types of record keeping equipment within the next two years?

	Code	Presently Have (1)	Need With Two Years (2)	Do Not Have & Do Need (3)
(1) File Cabinet	H15			
(2) Mechanical rotary file	H16			
(3) Microfilming system without automated retrieval system	H17			
(4) Microfilming system with automated retriefal system	H18			

(44) Within your department, how many new personnel positions have been created with funds from the Committee on Law and Order?

Code	Number of new personnel positions creates with law and order funds
[illegible]	

Of these new positions, how many have been or will be continued with city or county funds?

Code		Number to be continued
H21		Number Already Continued with city or county funds
H23		Number Dropped with Law and Order Funds stopped
H25		Number Presently funded with Law and Order Funds which will Probably be continued with city or county funds
H27		Number presently funded with Law and Order Funds which will Probably not be continued with city or county funds

This is to certify that the information included within this data instrument is accurate and appropriate for use in The Law Enforcement Data Manual.

Official Authorized to Complete This Data Instrument

City or County Served

PLEASE RETURN THE TECHNICAL DATA INSTRUMENT WITHIN FIFTEEN (15) WORKING DAYS OF DEPARTMENT RECEIPT OF THE INSTRUMENT. A SELF-ADDRESSED AND STAMPED ENVELOPE IS ENCLOSED.

THANK YOU FOR YOUR ASSISTANCE!

GS/dmf

Population ____________
Area ____________
Officer ÷ Population ____________
Dept. Budget ÷ Population ____________
Total Part I Crimes ____________
Crimes ÷ 100,000 ____________

1. Budgetary Information
Total City/County Budget ____________ Department Budget ____________
Total Budget ÷ Department Budget ____________ Department Personnel Budget ____________
Personnel Budget ÷ Department Budget ____________

2. Number of Positions
Sworn Positions ____________ Unsworn Positions ____________ Total Positions ____________
Sworn Positions ÷ Total Positions ____________ Anticipated Authorization of Positions 1975-1976 ____________

3. Personnel Information (full-time, sworn officers)

Length of Service	Total	Percent
1 day-11 months		
1-5 years		
6 years and over		

Age	Total	Percent
20-24		
25-29		
30-49		
50-and over		

Benefits Provided	
Retirement	
Life Insurance	
Accident/Disability	
False Arrest Insurance	
Hospitalization	
Workman's Compensation	
Hazardous Duty Pay	
Night Duty Pay	
Uniform Purchase/Replacement	
Equipment	
Vacation Leave	
Sick Leave	
Time Off for Educational Advancement	
Other	

Entry Requirements	
Age	
Height	
Weight	
Eyesight	
Written Test	
Psychological	
Polygraph	
Other	

Minimum Salaries	
Administrative	
Command	
Supervisory	
Special Units	
General Patrol	

4. Education and Training (full-time, sworn officers)

Inservice Training	Less than 40 hours	40 hours	More than 40 hours	Percent of Officers 40 hours or more
Administrative, Command, Supervisory				
General Patrol				

Educational Level	Less than High School	High School or GED	1 yr. coll.	2 yrs. coll.	3 yrs. coll.	4 yrs. coll.	Graduate Degree
Administrative, Command, Supervisory							
General Patrol							

Officers Currently Enrolled in an Educational Program ____________ ________%

Does the Department have a Salary Supplement or Other Educational Incentive Benefit?
____

5. Miscellaneous
Does the department have a policy which provides for lateral transfers? ____________

Number of full-time, sworn officers separated by Death, Resignation, Retirement or Discharge during the following years

	1971-1972	1972-1973	1973-1974
Total Separated			
Total Authorized			
Attrition Rate			

Average Number of Duty Hours Per Week for General Patrol ____________

Number of Officers Who Routinely Work a Second Job ____________

Does the Department have a formal, written policies and procedures manual? ____________

Number of Black Officers, sworn and unsworn ____________

Hours Per Week Department Headquarters Open ____________

Number of Vehicles Assigned to Department ____________

ADDENDUM B

Cover Letter used in the Survey.

Law Enforcement Executive Opinion Questionnaire.

Law Enforcement Technical Data Instrument.

Editing Instructions for Executive Opinion Questionnaire.

Editing Instructions for Technical Data Instrument.

NCNER North Carolina Department of Natural & Economic Resources

JAMES E. HOLSHOUSER, JR., GOVERNOR • JAMES E. HARRINGTON, SECRETARY

P.O. BOX 27687
RALEIGH 27611

TELEPHONE 919 829-4984

Dear Chief or Sheriff:

Enclosed with this letter, you will find an executive opinion survey and technical data instrument from which we request responses from you and every law enforcement executive in the state. These two questionnaires have been developed by improving last year's questionnaires through pre-tests and suggestions from chiefs and sheriffs in the state, the seventeen regional criminal justice planning directors, the sponsors of this survey, and representatives from the National Manpower Study funded by LEAA. This survey carries special importance as it will serve as a model for all other states to follow in data collection and personnel planning as a part of the National Manpower Survey, and represents an opportunity for North Carolina to put its best foot forward.

We ask that you personally respond to the executive opinion survey. Your response is considered to be given in confidence; however, the total response for sheriffs and chiefs of police will be available for all interested organizations. We also ask that you or someone you assign in your department respond to the technical data instrument. The responses will be compiled this fall into separate Technical Data Manuals for Sheriff Departments and Police Departments, and will be available to you early in 1976.

We ask that you respond to both questionnaires within 14 working days of their receipt, and that you return them to your regional planning office. Your regional planning director is coordinating all data collection within your region.

We thank you for your time and assistance in this important program.

Donald R. Nichols
Mr. Donald R. Nichols
Administrator
Law and Order Section

Mr. Cecil Hargett
Executive Director
N. C. Criminal Justice
Officers Training and
Standards Council

Perry Powell
Mr. Perry Powell
Director
N. C. Justice Academy

Sept.-Oct., 1975

ID 467-01

LAW ENFORCEMENT EXECUTIVE OPINION QUESTIONNAIRE

Name of Chief or Sheriff Filling Out this Questionnaire:

____

Department: ______________________________________

Telephone Number: __________________________________

GENERAL DIRECTIONS

1. PLEASE COMPLETE THIS DATA INSTRUMENT WITHIN 14 (FOURTEEN) WORKING DAYS AND RETURN TO YOUR REGIONAL PLANNING DIRECTOR, ALONG WITH THE ACCOMPANYING TECHNICAL DATA INSTRUMENT.

2. This questionnaire has been designed for FAST COMPLETION. Most questions can be answered by:
   a. Circling a code number opposite an answer, *not* the answer itself.
      Example: Yes . . . 1
      No . . . ②
   b. Writing a number on a line (Example: 15).
   c. Writing in your opinion in the few questions which are "open-ended." Space has been provided for these answers.

3. Please do not write in any of the boxes (Example: ☐☐) included in the questionnaire.

4. Please ignore the numbers in the margin of each page. These are card and column indicators to be used for data processing.

5. If you do not understand what a question means, please feel free to call your regional planning director or Joe Auten at the Division of Law and Order in Raleigh (919/829-7974).

6. Responses to this questionnaire are confidential and will be made available only in aggregate form.

Sept.-Oct., 1975

467-01
ID ____________ 6-9

Minimum Salary Program

1. North Carolina currently has a Minimum Salary program. Would you say that you:

Strongly favor its continuation 1
Favor its continuation 2
Are neutral 3
Oppose its continuation 4
Strongly oppose its continuation 5 10/6

2. At present, the minimum salary is $6,000, to be increased to $6,500 next year. Do you believe this minimum should be further increased?

Yes 1
No (SKIP TO Q. 4) . 2 11/3

3. IF YES: Please indicate which salary amount you feel would be the most appropriate minimum for all law enforcement officers in the State. (CIRCLE ONE NUMBER ONLY)

$7,000 1
$7,500 2
$8,000 3
$8,500 4
$9,000 . . . . 5 12/6

4. There is a proposal to develop the Minimum Salary Program into a salary incentive program to encourage further training and/or education of law enforcement officers. Would you say that you:

Strongly favor the proposal 1
Favor the proposal 2
Are neutral 3
Oppose the proposal 4
Strongly oppose the proposal 5 13/6

5. There is also a proposal to continue the Minimum Salary Program, but change it to require the county or city government to pay the full minimum salary to its officers after a given period of time. How do you feel about that? Would you say you:

Strongly favor the proposal 1

Favor the proposal 2

Are neutral 3

Oppose the proposal 4

Strongly oppose the proposal 5 14/6

6. If cities and counties are required to assume the Minimum Salary costs after a period of time, what do you think that period should be? (CIRCLE ONE NUMBER ONLY)

Immediately, less than 1 year if possible 1

After 1 year 2

After 2 years 3

After 3 years 4

After 4 years 5

After 5 years or more 6 15/7

Personnel Qualifications

7. Do you think recruits should complete the minimum basic training (160 hours) before being sworn as law enforcement officers?

Should complete the 160 hours before being sworn 1

Not necessary to complete the 160 hours before being sworn . . . 2 16/3

8. Would you favor law enforcement agencies utilizing a policy under which qualified personnel could move from one law enforcement agency to another without loss of rank?

Yes 1

No 2 17/3

9. Which of the following do you believe should first be emphasized to better assist your department in serving its constituents? (CIRCLE ONE NUMBER ONLY)

Hiring additional personnel with existing training and salary requirements 1

Improving training for existing personnel . 2

Improving salary structure for existing personnel 3

Something else (SPECIFY) ________________

____. 4 18/5

Training Academy

10. The North Carolina Justice Academy is considering developing the following courses to be given throughout the state, as well as at Salemburg. Please indicate the importance which, in your opinion, each course should receive for development of curriculum.

	Extremely Important	Important	Not Immediately Important	
a. Accident Investigation	1	2	3	19/4
b. Administrative & Management	1	2	3	20/4
c. Advanced Basic Training	1	2	3	21/4
d. Agressive Preventive Patrol Techniques	1	2	3	22/4
e. Arrest, Search and Seizure	1	2	3	23/4
f. Bomb Threats, Investigations & Disposals	1	2	3	24/4
g. Case Preparation & Courtroom Testimony	1	2	3	25/4
h. Civil Processes	1	2	3	26/4
i. Command & Supervisory	1	2	3	27/4
j. Consumer Fraud Law	1	2	3	28/4
k. Crime Prevention	1	2	3	29/4
l. Crime Scene Search	1	2	3	30/4
m. Criminal Code and Case Law	1	2	3	31/4
n. Crisis Intervention and Management	1	2	3	32/4
o. Crowd and Riot Control	1	2	3	33/4
p. Evidence Collection Technician	1	2	3	34/4
q. Family Crisis	1	2	3	35/4
r. Felony in Progress Procedures	1	2	3	36/4
s. Fingerprinting	1	2	3	37/4

10. (con't.)	Extremely Important	Important	Not Immediately Important	
t. Interpersonal Communications . .	1	2	3	38/4
u. Interviewing and Interrogation .	1	2	3	39/4
v. Juvenile Justice Law & the Rights of Children	1	2	3	40/4
w. Juvenile Problems	1	2	3	41/4
x. Law Enforcement Authority to Arrest	1	2	3	42/4
y. Law Enforcement Evidence Course	1	2	3	43/4
z. Leadership Techniques	1	2	3	44/4
aa. Liability of Law Enforcement Officers	1	2	3	45/4
bb. Liability of Police Administrative & Supervisory Personnel	1	2	3	46/4
cc. Narcotics & Dangerous Drugs . .	1	2	3	47/4
dd. Police-Community Relations . .	1	2	3	48/4
ee. Polygraph	1	2	3	49/4
ff. Precision Driving Techniques .	1	2	3	50/4
gg. Prisoner Custody & Transportation	1	2	3	51/4
hh. Rape & Other Sex Offenses . . .	1	2	3	52/4
ii. Recognizing/Combatting Organized Crime	1	2	3	53/4
jj. Report Writing	1	2	3	54/4
kk. Rights & Responsibilities of Police Administrators & Police Officers	1	2	3	55/4
ll. Roll Call Training Procedures .	1	2	3	56/4
mm. Search Warrant Preparation & Execution	1	2	3	57/4
nn. Traffic Flow Regulation	1	2	3	58/4
oo. Traffic Law Enforcement	1	2	3	59/4
pp. Unclear Case Investigation . .	1	2	3	60/4

10. (con't.)	Extremely Important	Important	Not Immediately Important	
qq. Vehicle & Occupation Control .	1	2	3	61/4
rr. Writing Policies/Procedures & Rules/Regulations Manual . . .	1	2	3	62/4
ss. Other (SPECIFY) ____________ ____________________________ .	1	2	3	63/4
tt. Other (SPECIFY) ____________ ____________________________ .	1	2	3	64/4
uu. Other (SPECIFY) ____________ ____________________________ .	1	2	3	65/4 79-80/01 Card 02

11. Please list the five courses from the previous list in order of importance to the training needs of your own department which you would like the Justice Academy to offer, with one (1) being the most important. Also please list the number of officers you think you would be able to send to each of these courses during calendar year 1976.

Rank	Name of Course	Number of Officers	
(1)	________________________	__________	10-11/9 12-14/0
(2)	________________________	__________	15-16/9 17-19/0
(3)	________________________	__________	20-21/9 22-24/0
(4)	________________________	__________	25-26/9 27-29/0
(5)	________________________	__________	30-31/9 32-34/0

12. Does your department have a procedure for replacement so officers can be freed for training?

Yes 1

No (SKIP TO Q. 14). . 2 35/3

13. IF YES: What procedure does your department use?

Reserve or auxiliary replacements 1

Temporary overtime work by other officers . 2

Force is adequate to cover temporary absences without replacement 3

Combination of above 4

Other (SPECIFY) ______________________ . 5 36/6

Crime Laboratory

14. Do you use the SBI crime laboratory services?

Yes 1
No (SKIP TO Q. 19). 2 37/3

15. IF YES: In your opinion, is the turn-around time satisfactory?

No 1
Yes (SKIP TO Q. 17) 2 38/3

16. IF NOT SATISFACTORY: Please explain why it is not satisfactory.

☐☐ 39-40/0

17. How do you rate the services of the SBI crime laboratory in general? (CIRCLE ONE ONLY)

Excellent 1
Good 2
Fair 3
Poor 4
Very Poor 5 41/6

18. In order to have the SBI improve its crime laboratory services, what suggestions would you have for improving them? Please include any such suggestions in the space provided below.

☐☐ 42-43/9

General

19. Do you think there should or should not be a law which would forbid the possession of pistols and revolvers except by the police and other authorized persons?

Should be such a law 1

Should not be such a law 2

Don't know 3 44/4

20. Would you favor a law that would provide for a fee which would increase the cost of pistols and revolvers to a minimum of $250 each?

Yes 1

No 2

Don't know. 3 45/4

21. Do you believe that the present North Carolina Habitual Offender Law should or should not be strengthened?

Should be strengthened 1

Should not be strengthened . . . 2

Don't know 3 46/4

22. Recognizing that most prisons in the State Prison System are filled to maximum capacity, do you believe the State would better be served by: (CIRCLE ONE ONLY)

Maintaining the present sentencing practice . . 1

Increasing the length of sentencing for habitual offenders concurrent with a reduction in length of sentences for first offenders 2

Appropriating more tax funds for prison construction to increase overall capacity . . 3

Other (SPECIFY) ______________________________

____ . 4 47/5

23. Public opinion suggests that the actual incidence of crime (both reported and unreported) has been increasing in recent years. Do you agree with this opinion?

Yes	1	
No (SKIP TO Q. 25) . .	2	48/3

24. From your experience as a law enforcement officer, how important would you say each of the following factors is in the increased incidence of crime? (CIRCLE ONE NUMBER ON EACH LINE.)

	Extremely Important	Somewhat Important	Not of Importance	No Effect on Incidence of Crime	
a. Increased unemployment .	1	2	3	4	49/5
b. An increasing population between ages of 16-24 .	1	2	3	4	50/5
c. Population movement into the cities	1	2	3	4	51/5
d. Inadequate resources for law enforcement & criminal justice agencies . .	1	2	3	4	52/5
e. The policies of the courts & correctional agencies.	1	2	3	4	53/5
f. General reduction in respect for moral standards	1	2	3	4	54/5
g. TV & news media portrayal of violence	1	2	3	4	55/5
h. The policies & programs of the public educational system	1	2	3	4	56/5

25. From your professional experience in law enforcement, how important would you say the following factors are in increasing the reported crime rate?

	Extremely Important	Somewhat Important	Not Important	
a. The recent development of accurate criminal justice reporting systems.	1	2	3	57/4
b. The development of law enforcement programs to encourage the public to report crimes	1	2	3	58/4
c. The actual rapid rise in incidence of crime	1	2	3	59/4

26. From your experience in the law enforcement field are there any additional comments or suggestions you would like to make to help improve law enforcement in North Carolina? (USE SPACE PROVIDED BELOW. USE ADDITIONAL SHEETS OF PAPER IF NECESSARY)

☐☐ 60-61/9

THANK YOU VERY MUCH FOR YOUR
ASSISTANCE

79-80/02

467-01

Sept.-Oct., 1975

ID ________________

LAW ENFORCEMENT TECHNICAL DATA INSTRUMENT

Name of person filling out this questionnaire:

____

Position: ________________________________

Department: ______________________________

Telephone Number: _________________________

GENERAL DIRECTIONS

1. PLEASE COMPLETE THIS DATA INSTRUMENT AS RAPIDLY AS POSSIBLE SO THAT IT CAN BE RETURNED BY YOUR CHIEF/SHERIFF TO THE REGIONAL PLANNING DIRECTOR WITHIN 14 (FOURTEEN) WORKING DAYS AFTER DEPARTMENTAL RECEIPT.

2. This data instrument has been designed with the intent of compiling information essential for strengthening local law enforcement in North Carolina, including information about salaries, fringe benefits, manpower strength, special units, records, etc., and will be the data included in The Law Enforcement Data Manual.

3. This questionnaire has been designed for FAST COMPLETION. All questions can be answered by:
   a. Circling a code number opposite an answer, not the answer itself.
      Example: Yes . . . 1
      No . . . ②
   b. Writing a number on a line. (Example: _15_)
   c. Entering a code on a line:
      _0_ for "None" or "Not Applicable"
      _NA_ for "Information Not Available"

4. Please answer every question. If an item is really not available or does not exist, you should reply with one of the codes listed in 3-c above. THERE SHOULD BE NO BLANKS LEFT FOR ANY QUESTION UNLESS THERE ARE SPECIFIC INSTRUCTIONS WITHIN THE QUESTIONNAIRE TO SKIP CERTAIN QUESTIONS.

5. Please ignore the numbers in the margin of each page. These are [illegible] and column indicators to be used in data processing.

6. If you do not understand what a question means, or you do not know how to answer it, please call your regional planning director or Mr. Joe Auten at the Division of Law and Order. (919/829-797[illegible])

7. Please answer questions carefully. Your response will be considered an official report of your police or sheriff department.

467-01 Card 03

Sept.-Oct., 1975 ID ______________ 6-9

Budget

1. What is the total budget for your department for fiscal year 1976 (July 1, 1975 to June 30, 1976) excluding capital outlays such as construction, but including any monies for operation of jails.

(Total budget) ______________________ 10-17/9

2. What is your total departmental budget for personnel expenses for fiscal year 1976 (salaries, benefits, etc., but not including training)? (INCLUDE FEDERAL FUNDS IF THEY ARE PART OF YOUR BUDGET)

(Total personnel budget) ________________ 18-24/9

3. What is your total departmental training budget for fiscal year 1976 (excluding capital outlays, such as construction and the pay of trainees)? (INCLUDE FEDERAL FUNDS IF THEY ARE PART OF YOUR BUDGET.)

(Total training budget) _________________ 25-30/9

Personnel Profile

4. What is the total number of full-time personnel positions that are authorized in your department budget during fiscal year 1975-76?

	Number	
a. Sworn positions	__________	31-33/0
b. Unsworn positions	__________	34-36/0
Total	__________	37-39/0

5. How many of these were new positions authorized as of July 1, 1975?

	Number	
a. Sworn positions	__________	40-42/0
b. Unsworn positions	__________	43-45/0
Total	__________	46-48/0

6. What was the total number of full-time personnel actually employed in your department as of July 1, 1975?

	Number	
a. Sworn positions	__________	49-51/0
b. Unsworn positions	__________	52-54/0
Total	__________	55-57/0

7. What was the total number of part-time paid personnel actually employed in your department as of July 1, 1975?

Number

a. Sworn positions ________ 58-60/0

b. Unsworn positions ________ 61-63/0

Total ________ 64-66/0

8. Please indicate below the number of part-time unpaid personnel in your department as of July 1, 1975?

Number

a. Sworn positions ________ 67-69/0

b. Unsworn positions ________ 70-72/0

Total ________ 73-75/0

9. How many full-time sworn personnel left your department during fiscal year 1974-75 for the following reasons: 79-80/03
Card 04

Number

a. Death . . . . ________ 10-12/0

b. Resignation . . . . ________ 13-15/0

c. Retirement . . . . ________ 16-18/0

d. Dismissal . . . . . ________ 19-21/0

e. Other (SPECIFY)

________________ . ________ 22-24/0

10. Please indicate the length of law enforcement service of full-time sworn personnel in your department as of July 1, 1975. (THE TOTAL GIVEN HERE SHOULD BE THE SAME AS THE NUMBER IN QUESTION 6, PART "a".)

Number of Personnel

a. Less than 1 year . . . . ________________ 25-27/0

b. 1 year up to (but not including) 3 years . . . . ________________ 28-30/0

c. 3 years up to 5 years . . . . . ________________ 31-33/0

d. 5 years up to 10 years . . . . . ________________ 34-36/0

e. 10 years up to 15 years . . . . ________________ 37-39/0

f. 15 years up to 25 years . . . . ________________ 40-42/0

g. 25 years and over . . . . ________________ 43-45/0

Total ________________ 46-48/0

11. Please give the number of full-time sworn personnel in your department as of July 1, 1975, whose ages fall within the following ranges: (AGAIN THE TOTAL SHOULD BE THE SAME AS "a", QUESTION 6)

	Number of Personnel	
a. Under 25 years of age	________________	49-51/0
b. Twenty-five up to (but not including) 30 years of age	________________	52-54/0
c. Thirty up to 40 years of age	________________	55-57/0
d. Forty up to 50 years of age	________________	58-60/0
e. Fifty up to 60 years of age	________________	61-63/0
f. Sixty up to 65 years of age	________________	64-66/0
g. Sixty-five and over	________________	67-69/0
Total	________________	70-72/0
		79-80/04
		Card 05

PLEASE NOTE:
Many of the following questions deal with position categories of full-time personnel as defined below. PLEASE REFER BACK TO THESE DEFINITIONS IF NECESSARY IN ANSWERING ALL QUESTIONS IN WHICH SUCH CATEGORIES APPEAR.

Top Administration/Top Management - Chief, Sheriff; Asst. Chiefs, Chief Deputies.

General Command/Middle Level Management - All sworn officers above the rank of sergeant and below rank of assistant chiefs or chief deputies.

First Line Supervisory - All sergeants and corporals.

First Line Law Enforcement Officers/Custodial Officers - Patrolmen, deputies, jailors, matrons, bailiffs.

Professional and Technical Civilian Personnel - Legal advisors, unsworn administrative assistants, dispatchers, laboratory technicians.

Other Civilian Personnel/Support Personnel - Secretaries, clerks, maintenance personnel.

All others - Police cadets, meter maids, crossing guards, etc.

12. How was your total full-time personnel, both sworn and unsworn distributed within the position categories, as of July 1, 1975? (THE TOTAL SHOULD BE THE SAME AS THE TOTAL FOR QUESTION 6)

	Number	
a. Top Administration/Top Management	________	10-12/0
b. General Command/Middle Level Management	________	13-15/0
c. First Line Supervisory	________	16-18/0
d. First Line Law Enforcement Officers/ Custodial Officers	________	19-21/0
e. Professional & Technical Civilian Personnel . .	________	22-24/0
f. Other Civilian Personnel/Support Personnel . .	________	25-27/0
g. All others	________	28-30/0
Total	________	31-33/0

13. Now, please give the number of full-time personnel (both sworn and unsworn) in your department assigned specifically to duty positions performing the following functions: (INCLUDE HERE ALL FULL-TIME PERSONNEL IN THE FUNCTION IN WHICH THEY SPEND 50% (OR MOST) OF THEIR TIME -- DO NOT COUNT AN INDIVIDUAL MORE THAN ONCE. PLEASE PUT A ZERO ("0") ON ANY LINE IN WHICH YOU HAVE NO PERSONNEL PERFORMING THAT FUNCTION. THE OVERALL TOTALS FOR "SWORN" AND "UNSWORN", SHOULD AGREE WITH THOSE IN "a" AND "b" OF QUESTION 6.)

		Number of Persons		
		Sworn	Unsworn	
a.	Top administrative functions	________	________	34-39/0
b.	Legal advice functions	________	________	40-45/0
c.	Administrative assistance functions (not secretaries or clerical support).	________	________	46-51/0
d.	Training functions	________	________	52-57/0
e.	Planning functions	________	________	58-63/0
f.	Personnel functions	________	________	64-69/0
g.	Internal affairs/inspection functions	________	________	70-75/0
				79-80/05 Card 06
h.	Traffic control/accident investigation	________	________	10-15/0
i.	General patrol (other than traffic)	________	________	16-21/0
j.	Lock-up and/or jail functions	________	________	22-27/0
k.	Bailiff/court liaison	________	________	28-33/0
l.	Civil process/capias functions	________	________	34-39/0
m.	Narcotics control	________	________	40-45/0
n.	Vice control	________	________	46-51/0
o.	Intelligence/organized crime control	________	________	52-57/0
p.	General investigative functions	________	________	58-63/0
q.	Crime prevention	________	________	64-69/0
r.	Crime laboratory functions	________	________	70-75/0
				79-80/06 Card 07
s.	Community relations/services functions	________	________	10-15/0
t.	School liaison functions	________	________	16-21/0
u.	Juvenile enforcement functions	________	________	22-27/0
v.	Communications/dispatching functions	________	________	28-33/0
w.	Records systems/data processing	________	________	34-39/0
x.	General secretarial/clerical functions	________	________	40-45/0
y.	Maintenance	________	________	46-51/0
z.	Other (SPECIFY) ______________________ .	________	________	52-57/0
	Total	________	________	58-63/0

14. Please give the total number of full-time personnel, both sworn and unsworn in your department, as of July 1, 1975, for each of the following sex and race distributions (TOTALS IN EACH CATEGORY SHOULD EQUAL THE NUMBERS GIVEN IN QUESTION 12.)

	Male White	Male Non-White	Female White	Female Non-White	Totals	
a. Top Administration/Top Management.	____	____	____	____	____	64-78/0 79-80/07 Card 08
b. General Command/Middle Level Management	____	____	____	____	____	10-24/0
c. First Line Supervisory . .	____	____	____	____	____	25-39/0
d. First Line Law Enforcement Officers/Custodial Off. .	____	____	____	____	____	40-54/0
e. Professional & Technical Civilian Personnel . . .	____	____	____	____	____	55-69/0 79-80/08 Card 09
f. Other Civilian Personnel/ Support Personnel	____	____	____	____	____	10-24/0
g. All others	____	____	____	____	____	25-39/0
			Grand Total		____	40-42/0

15. How many reserve and auxiliary unit officers are available to your department?

(Number) ____________________ 43-45/0

16. How many personnel positions within your department have been created with funds from the Committee on Law and Order (LEAA) since Jan. 1, 1969?

(Number) ____________________ 46-47/0

17. Of these positions, please give the numbers which have been continued, have been dropped and which are presently funded by Law and Order (LEAA) as indicated below. (THE TOTAL SHOULD EQUAL THE TOTAL SHOWN IN QUESTION 16)

	Number	
a. Already continued with city or county funds . .		48-49/0
b. Dropped when Law and Order funds stopped . . .		50-51/0
c. Presently funded with Law and Order funds . . .		52-53/0
Total		54-55/0

Salaries

18. What is the authorized annual salary range for the following full-time sworn positions in your department?

	Lowest Salary	Highest Salary	
a. Chief/Sheriff			56-65/0
b. Asst. Chiefs/Chief Deputies . . .			66-75/0
			79-80/09 Card 10
c. Captains			10-19/0
d. Lieutenants			20-29/0
e. Sergeants			30-39/0
f. Patrolmen/Deputies			40-49/0

19. How many full-time sworn personnel in your department were in the following salary ranges as of July 1, 1975? (TOTAL SHOULD BE THE SAME AS QUESTION 6 "a".)

		Number	
a.	$6,000 up to (but not including) $6,500 . . .	________	50-52/0
b.	$6,500 up to $7,000 . .	________	53-55/0
c.	$7,000 up to $8,000 . .	________	56-58/0
d.	$8,000 up to $9,000 . .	________	59-61/0
e.	$9,000 up to $10,000 . .	________	62-64/0
f.	$10,000 up to $12,000 .	________	65-67/0
g.	$12,000 up to $15,000 .	________	68-70/0
h.	$15,000 up to $20,000 .	________	71-73/0
i.	$20,000 and over	________	74-76/0
			79-80/10 Card 11
	Total	________	10-12/0

20. Does your department permit full-time sworn personnel to have a second job?

No (SKIP TO Q. 22). . 1

Yes 2 13/3

21. IF YES: Please give the number of full-time sworn officers in your department who routinely work a second job.

(Number) ____________________ 14-16/0

Benefits

22. Indicate whether your department provides any of the following benefits to full-time sworn personnel. (CIRCLE ONE NUMBER ON EACH LINE)

	Yes	No	
a. Retirement	1	2	17/3
b. Life insurance	1	2	18/3
c. Hospital insurance	1	2	19/3
d. Accident/disability insurance	1	2	20/3
e. False arrest insurance	1	2	21/3
f. Workmens compensation	1	2	22/3
g. Hazardous duty pay	1	2	23/3
h. Night duty pay	1	2	24/3
i. Paid court time	1	2	25/3
j. Uniform purchase/replacement	1	2	26/3
k. Equipment purchase/replacement	1	2	27/3
l. Vacation leave	1	2	28/3
m. Sick leave	1	2	29/3
n. Other (SPECIFY) ______________________________	1	2	30/3

Education

23. How many full-time sworn personnel in your department as of July 1, 1975 had completed the following levels of education? (THE GRAND TOTAL SHOULD EQUAL THE NUMBER GIVEN IN "a" OF QUESTION 6)

	Less Than High School	High School or GED	Some College No Degree	AA,AS Degree	BA,BS Degree	Grad. Degree	Totals	
a. Top admin./Top management . .	______	______	______	______	______	______	______	31-51/0
b. General command/ Middle level management . .	______	______	______	______	______	______	______	52-72/0
								79-80/11 Card 12
c. First line supervisory . .	______	______	______	______	______	______	______	10-30/0
d. First line law enforcement officers/Custodial off. .	______	______	______	______	______	______	______	31-51/0
e. Any others . .	______	______	______	______	______	______	______	52-72/0
					Grand Total		______	73-75/0
								79-80/12 Card 13

24. How many full-time sworn personnel in your department are now enrolled in an education or college program?

	GED	Two Year Degree	Four Year Degree	Graduate Degree	
a. Top admin./Top management . . .	______	______	______	______	10-21/0
b. Gen. command/Mid. level mgmt. .	______	______	______	______	22-33/0
c. First line supervisory	______	______	______	______	34-45/0
d. First line law enforcement officers/Custodial officers .	______	______	______	______	46-57/0
e. Any others	______	______	______	______	58-69/0

25. Are any of the following educational benefits provided for members of your department? (CIRCLE ONE NUMBER FOR EACH LINE)

	Yes	No	
a. Adjusting schedules to facilitate class attendance	1	2	70/3
b. Allowing time off with pay to attend class . .	1	2	71/3
c. Departmental or city/county subsidies for books and tuition	1	2	72/3
d. Increasing pay based upon number of accumulated college credits or degrees	1	2	73/3
e. Using formal academic education as part of the basis for promotions	1	2	74/3
			79-80/13 Card 14

Training

26. Give the number of full-time sworn officers in your department who received formal in-service (not OJT, basic or roll call) training in the last fiscal year - July 1, 1974 to June 30, 1975. (PLEASE BE SURE TO ENTER IN THE FIRST COLUMN THE NUMBER, IN EACH CATEGORY, WHO RECEIVED NO IN-SERVICE TRAINING DURING THE LAST FISCAL YEAR.)

	Received No In-service Training	1-16 Hours	17-39 Hours	40 Hours or More	
a. Top administration/Top management					10-21/0
b. General command/Middle level management					22-33/0
c. First line supervisory . . .					34-45/0
d. First line law enforcement officers/custodial officers.					46-57/0
e. Any others					58-69/0
					79-80/14 Card 15
Totals					10-21/0

27. Of those who did not receive in-service training during the last fiscal year (those tabulated in the first column of Question 26), how many were first line law enforcement or custodial officers who received basic training within that period - July 1, 1974 through June 30, 1975?

(Number) ____________________ 22-24/0

Entry Requirements

28. Does your department use any of the following entry requirements for sworn personnel? (CIRCLE ONE NUMBER ON EACH LINE)

	Yes	No	
a. Age (over age 20)	1	2	25/3
b. Height - Minimum requirement	1	2	26/3
c. Height - Maximum restriction	1	2	27/3
d. Weight - Minimum requirement	1	2	28/3
e. Weight - Maximum restriction	1	2	29/3
f. Eyesight	1	2	30/3
g. Written test (other then ESC test).	1	2	31/3
h. Psychological exam	1	2	32/3
i. Polygraph	1	2	33/3
j. Other (SPECIFY) ____________________ .	1	2	34/3

29. What is the minimum education your department requires of new recruits?

High school diploma or GED	1	
Some college, but no degree	2	
AA or AS degree	3	
BA or BS degree	4	
Other (SPECIFY) ____________________ .	5	
No minimum required	6	35/7

30. Does your department utilize a policy under which personnel can move from another law enforcement agency to yours without loss of rank?

Yes 1

No 2 36/3

Departmental Activities Section

31. How many total calls for service did your department record in calendar year 1974 -- January 1, 1974 through December 31, 1974?

(Total calls) ____________________ 37-41/0

32. How many investigations did your department conduct during calendar year 1974?

(Number of investigations) ________________ 42-46/0

33. Of these investigations, how many were not traffic related?

(Number of Non-Traffic Related Investigations) ___________ 47-51/0

34. How many drug investigations did your department conduct in calendar year 1974?

(Number) __________________ 52-55/0

35. Of the drug investigations, how many resulted in drug arrests for felony or misdemeanor?

	Number	
a. Felonies	_________	56-59/0
b. Misdemeanors . .	_________	60-63/0

IF ANY OF THE DRUG ARRESTS WERE FELONIES, PLEASE ANSWER QUESTION 36. OTHERWISE SKIP TO QUESTION 37.

36. How many of the felony arrests resulted in conviction?

(Number) ______________________ 64-66/0

37 What amounts of the following drugs were seized during calendar year 1974? (IF YOU DID NOT KEEP RECORDS OF DRUGS SEIZED, PLEASE MARK "NA" FOR EACH ITEM.)

	Amount		
a. Narcotics (opium, heroin) . .	_____	gms.	67-71/0
b. Depressants (barbituates, methaqualone, etc.)	_____	units	72-77/0
			79-80/15 Card 16
Stimulants			
c. Cocaine.	_____	gms.	10-15/0
d. Amphetamines	_____	units	16-22/0
e. Hallucinogens (LSD, mescaline, MDA, PCP)	_____	units	23-29/0
Cannabis			
f. Marijuana	_____	gms.	30-35/0
g. Hashish.	_____	gms.	36-41/0
h. Other (SPECIFY) __________.	_____		42-46/0

(NOTE: 1 oz. = approximately 31 grams -- if your records are in ounces and/or pounds, please convert into grams.)

38. How many juvenile petitions were initiated by the department in 1974 (January 1, 1974 through December 31, 1974)?

(Number of Juvenile Petitions Initiated) ________________________ 47-50/0

39. Does your department analyze Reported Crime data for the purpose of manpower allocation?

Yes 1

No 2 51/3

40. Does your department have a written policies and procedures manual?

Yes 1

No 2 52/3

Equipment & Facilities Section

41. How many automobiles or other four wheel vehicles did your department have as of July 1, 1975?

(Number) ____________________ 53-55/0

42. List the number of each of the following kinds of equipment and/or facilities that your department has access to.

	Number	
a. Mug cameras	________	56-57/0
b. Polaroid cameras	________	58-59/0
c. 35 mm. cameras	________	60-61/0
d. 4x5 cameras	________	62-63/0
e. Fingerprinting kits	________	64-65/0
f. Drug analysis kits	________	66-67/0
g. Dark room (black and white)	________	68-69/0
h. Dark room (color)	________	70-71/0

43. Does your department have access to a copy machine 24 hours a day, 7 days a week?

Yes . . . 1

No . . . 2 72/3

44. Please indicate whether your department utilized the services of the following crime laboratories during the first six months of 1975.

	Yes Often	Yes Seldom	No Never	
a. Federal Bureau of Investigation . .	1	2	3	73/4
b. State Bureau of Investigation . . .	1	2	3	74/4
c. Charlotte Police Dept. Lab	1	2	3	75/4
d. Own department lab	1	2	3	76/4
e. Other (SPECIFY) ______________.	1	2	3	77/4

79-80/16

45. What was the average turn-around time in days required to get results from each of the laboratories? "Turn around time" is defined as the time from date of mailing or submission of the evidence to a laboratory to the time of return of the laboratory report to your department. (IF YOU NEVER USE ONE OR MORE OF THE LABORATORIES PLACE A ZERO IN THE MATCHING "NUMBER OF DAYS" COLUMN. DO NOT LEAVE ANY LINE BLANK.)

Card 17

	Number of Days	
a. Federal Bureau of Investigation	____________	10-12/0
b. State Bureau of Investigation	____________	13-15/0
c. Charlotte Police Department Lab	____________	16-18/0
d. Own department lab	____________	19-21/0
e. Other (SPECIFY) ____________________.	____________	22-24/0

46. Do you have any of the following types of record-keeping equipment?

	Yes	No	
a. File cabinet(s)	1	2	25/3
b. Mechanical rotary file	1	2	26/3
c. Microfilming system without automatic retrieval	1	2	27/3
d. Microfilming system with automatic retrieval	1	2	28/3

PLEASE NOTE:

1. SHERIFFS' DEPARTMENTS ONLY COMPLETE Q. 47 & 48.
2. SHERIFFS' AND POLICE DEPTS. WHICH HAVE A JUVENILE UNIT, ANSWER ITEMS 49 THROUGH 53.
3. POLICE DEPTS. WITHOUT A JUVENILE UNIT: SKIP TO ITEM 53.

(SHERIFF'S DEPARTMENTS ONLY)

47. Please give the number of hand-gun permits that were issued by your sheriff's department in each of the following calendar years:

	Number	
a. 1971	______	29-32/0
b. 1972	______	33-36/0
c. 1973	______	37-40/0
d. 1974	______	41-44/0
e. 1975 (6 mon. only, Jan. 1 - June 30) . . .	______	45-48/0

48. How many jailors do you have in your department as indicated below? (THIS TOTAL SHOULD AGREE WITH THE TOTAL GIVEN IN SECTION j OF QUESTION 13.)

	Number	
a. Male jailors. .	__________	49-51/0
b. Matrons	__________	52-54/0
Total	__________	55-57/0

IF SHERIFF'S DEPT. HAS A JUVENILE UNIT CONTINUE, OTHERWISE SKIP TO ITEM 53.

(JUVENILE UNITS ONLY)

49. What was the total number of contacts (whereby a juvenile could be petitioned) handled by your Juvenile Unit in calendar year 1974?

(Number) ________________________ 58-62/0

50. Of these contacts, how many did result in juvenile petitions in 1974?

(Number) ________________________ 63-66/0

51. Of the number not resulting in petitions (the number given in Question 49 minus the number in Question 50), how many referrals were made to other agencies or services?

(Number) ________________________ 67-70/0

52. Please indicate whether or not your Juvenile Unit made referrals to each of the following agencies or services in 1974. (CIRCLE ONE NUMBER ON EACH LINE)

	Yes Frequently	Yes Sometimes	No Never	
a. Mental health services	1	2	3	71/4
b. Social services	1	2	3	72/4
c. Group homes	1	2	3	73/4
d. Court counselors	1	2	3	74/4
e. Youth service bureaus	1	2	3	75/4
f. Other (SPECIFY) ______________ .	1	2	3	76/4
				79-80/17

53. This is to certify that the information included within this data instrument to the best of my knowledge is accurate and appropriate for use in THE LAW ENFORCEMENT DATA MANUAL.

____
Official Authorized to Complete
This Data Instrument

THANK YOU FOR YOUR ASSISTANCE

EDITING INSTRUCTIONS

Law Enforcement Executive Opinion Questionnaire

Check in Law Enforcement Technical Data Instrument questionnaire page 1, question 6 to make sure that there is atleast one full-time sworn officer in their department. If there is not, set aside both questionnaires. Do not edit.

General: Whenever a response is carded be sure to clearly mark the ID number and complete question number on the card.

Q. 2. Check for skip pattern.

Q. 9. If respondent answered "something else" card the response. If "something else" is the answer make sure the "4" is circled.

Q. 10. If respondent answered "other" card the response. NOTE: Don't forget to include question number and corresponding letters e.g., Q. 10-ss

11. Code courses according to the following:
next page

EDITORS NOTE: Each line has two sets of residual codes. The "9" referes to the name of the course and the "0" refers to the number of officers. If the name of the course is filled in and the number of officers is left blank, circle the corresponding "0" residual code column. The opposite applies if only the number of officers is given.

a.	Accident Investigation	01
b.	Administrative & Management	02
c.	Advanced Basic Training	03
d.	Agressive Preventive Patrol Techniques	04
e.	Arrest, Search, and Seizure	05
f.	Bomb Threats, Investigations & Disposals	06
g.	Case Preparation & Courtroom Testimony	07
h.	Civil Processes	08
i.	Command & Supervisory	09
j.	Consumer Fraud Law	10
k.	Crime Prevention	11
l.	Crime Scene Search	12
m.	Criminal Code and Case Law	13
n.	Crisis Intervention and Management	14
o.	Crowd and Riot Control	15
p.	Evidence Collection Technician	16
q.	Family Crisis	17
r.	Felony In Progress Precedures	18
s.	Fingerprinting	19
t.	Interpersonal Communications	20
u.	Interviewing and Interrogation	21
v.	Juvenile Justice Law & the Rights of Children	22
w.	Juvenile Problems	23
x.	Law Enforcement Authority to Arrest	24
y.	Law Enforcement Evidence Course	25
z.	Leadership Techniques	26
aa.	Liability of Law Enforcement Officers	27
bb.	Liability of Police Administrative & Supervisory Personnel	28
cc.	Narcotics & Dangerous Drugs	29
dd.	Police-Community Relations	30
ee.	Polygraph	31
ff.	Precision Driving Techniques	32
gg.	Prisoner Custody & Tranportation	33
hh.	Rape & Other Sex Offenses	34
ii.	Recognizing/Combatting Organized Crime	35
jj.	Report Writing	36
kk.	Rights & Responsibilities of Police Administrators & Police Officers	37
ll.	Roll Call Training Procedures	38
mm.	Search Warrant Preperation & Execution	39
nn.	Traffic Flow Regulation	40
oo.	Traffic Law Enforcement	41
pp.	Unclear Case Investigation	42
qq.	Vehicle & Occupation Control	43
rr.	Writing Policies/Procedures & Rules/Regulations Manual	44
ss.	Other	45
tt.	Other	46
uu.	Other	47
	No Answer	99

Q. 12. Check for skip pattern.

Q. 13. If respondent answered "other" card the response. If an entry is made in "other" in addition to another category, code "combination of above", code 4.

Q. 14. Check for skip pattern.

Q. 15. Check for skip pattern.

Q. 16. Card the response.

Q. 18. Card the response.

Q. 22. If respondent answered "other" card the response.

Q. 23. Check for skip pattern.

Q. 26. Card the response.

EDITING INSTRUCTIONS

Law Enforcement Technical Data Instrument

General: Always use whole dollars. If given, round the cents to the nearest dollar. Clearly slash out the cents in red.

When a response is to be carded, be sure that the complete question number and the ID number are clearly marked on the card.

Anytime the respondent has put in "NA" write in the appropriate number of "9"s in red, next to the "NA" response and slash out the "NA", for example, in a three column field: NA 999. If a line is left blank and there is no clue to indicate response, code NA.

Q. 1. Follow general procedures. NA= 99999999

Q. 2. NA= 9999999

Q. 3. NA= 999999

Q. 4. For each line NA= 999. Check total.

Q. 5. For each line NA= 999. Check total.

Q. 6. For each line NA= 999. Check total.

Q. 7. For each line NA= 999. Check total.

Q. 8. For each line NA=999.

Q. 9. For each line NA= 999. If all lines are left blank, then all must be NA code. If respondent answered "other", card the response. If it is obvious that the respondent totalled "a" thru "d" under the "other" category (e), slash it out and circle the residual code.

Q. 10. For each line NA= 999. Check total. Be sure that total is the same as the number in Q. 6.a.

Q. 11. For each line NA= 999. Check total. Be sure that total is the same as the number in Q. 6.a.

Q. 12. For each line NA= 999. Check total. Be sure that total is the same as the total in Q. 6.

Q. 13. For each individual line NA= 999. Check totals. Be sure that "sworn" total agrees with number in Q. 6.a., and "unsworn" total agrees with number in Q. 6.b. If respondent answered "other", card response.

NOTE: If unable to separate number given for "traffic control" and general patrol" put them in "general patrol."

Q. 14. For each individual line NA= 999. Check totals and grand total. Totals in each category should equal numbers given in Q. 12.

Q. 15. NA= 999.

Q. 16. NA= 99.

Q. 17. For each line NA= 99. Check total. Be sure that total is the same as answer shown in Q. 16.

Q. 18. For each individual line NA= 99999. If there is no salary range, lowest salary and highest salary should be the same amount.

Q. 19. For each line NA= 999. Check total. Be sure that total is same as number given in Q. 6.a.

Q. 20. Check for skip pattern.

Q. 21. NA= 999.

Q. 22. If respondent answered "other", card response. If the "other" category is left blank circle the corresponding "2" code

Q. 23. For each individual line NA= 999. Check totals and grand total. Grand total should equal answer given in Q. 6.a.

Q. 24. For each individual line NA= 999.

Q. 26. For each individual line NA= 999. Check totals.

Q. 27. NA= 999.

Q. 28. If respondent answered "other", card response. If the "other" category is left blank circle the corresponding "2" code.

Q. 29. If respondent answered "other", card response and be sure that the "5" is circled.

Q. 31. NA= 99999. If left blank and there is no clue to indicate response, code NA.

Q. 32. NA= 99999. If left blank and there is no clue to indicate response, code NA.

Q. 33. NA= 99999. If left blank and there is no clue to indicate response, code NA.

Q. 34. NA= 9999. If left blank and there is no clue to indicate response, code NA.

Q. 35. For each line NA= 9999. Total of 35.a. and 35.b. must be equal to or less than Q. 34.

Q. 36. NA= 999. Be sure that the answer in Q. 36 is either equal to or less than Q. 35.a. (felonies) if not use NA code.

Q. 37.
a. NA= 99999
b. NA= 999999
c. NA= 999999
d. NA= 9999999
e. NA= 9999999
f. NA= 999999
g. NA= 999999
h. NA= 99999

If any of lines "a" thru "g" are left blank, with no clue to indicate response, code NA.

If respondent answered "other", card the response. If the "other" category is left blank or has an NA filled in, circle the residual code.

Q. 38. NA= 9999. If left blank, with no clue to indicate response, code NA.

Q. 41. NA= 999. If left blank, with no clue to indicate response, code NA

Q. 42. For each line NA= 99.

Q. 44. If respondent answered "other", card the response. If the "other" category is left blank circle the corresponding "3" code.

Q. 45. For each line NA= 999. If respondent answered "other", card the response. If the "other" category is left blank or has an NA filled in circle the residual code.

Q. 47 & 48. Refer to cover sheet, if ID number begins with a "one" and "Department" says "Sheriff" then these questions should be answered. Check skip pattern. If sections that should have been answered were omitted, code NA.

Q. 47. For each line NA= 9999. If columns are left blank, determine if 0000 or 9999 should be coded.

Q. 48. For each line NA= 999. Check total. Total does not have to agree with 13.j. Part-time jailors may be counted here.

Q. 49. NA= 99999

Q. 50. NA= 9999. Must be equal to or less than Q. 49.

Q. 51. NA= 9999. Number must be equal to or less than Q. 49 minus Q. 50.

Q. 52. If respondent answered "other" card the response. If the "other" category is left blank, circle the "3" code--exception is when Q. 52 isn't answered at all.

APPENDUM C

Juvenile Residential Care Questionnaire.

Juvenile Justice Nonresidential Services Questionnaire.

Juvenile Detention Center Questionnaire.

Juvenile Training Schools and Court Counselors Questionnaire.

467-04

Sept.-Oct., 1975

ID No. ________

JUVENILE RESIDENTIAL CARE QUESTIONNAIRE

Name of Person Filling Out this Questionnaire:

____

Position: ________________________________

Residential Facility: ____________________

Address: ________________________________

Telephone Number: ________________________

GENERAL INSTRUCTIONS

1. Please note that although this questionnaire is meant to include temporary shelter facilities, group homes and other residential facilities specializing in serving youths with behavioral problems, we have used the term "group homes" throughout. Please answer in terms of your residential facility.

2. If your staff is responsible for more than one home, please submit one questionnaire for each home. (Divide staff time, if necessary, for each home.)

3. PLEASE RETURN THIS DATA INSTRUMENT IN THE POSTAGE-PAID RETURN ENVELOPE WITHIN 14 (FOURTEEN) WORKING DAYS DIRECTLY TO ANNE BRYAN, YOUTH PROGRAMS CHIEF, LAW & ORDER SECTION, DEPARTMENT OF NATURAL & ECONOMIC RESOURCES, P.O. BOX 27687, RALEIGH, N.C. 27611.

4. This data instrument has been designed with the intent of compiling information essential for improving youth services in North Carolina. Please answer questions carefully. Your response will be considered the official report of your residential facility.

5. Please answer all questions in reference to calendar year 1974.

6. If you do not understand what a question means, or you do not know how to answer it, call Anne Bryan at 919/829-7974.

7. Questions can be answered by:
    a. Circling a code number opposite an answer, not the answer itself.
        Example: Yes . . . 1
        No . . . ②
    b. Writing a number on a line. (Example: 15)
    c. Entering a code on a line:
        0 for "None" or "Not Applicable"
        NA for "Information Not Available"

467-04

Sept.-Oct., 1975 ID No. ________ 6-7

Capacity & Budget

1. Was the group home in operation (i.e., with children in residence) for twelve months in calendar year 1974?

Yes 1

No 2 8/3

2. IF NO: Please indicate how many months the group home was in operation in calendar year 1974.

Months ☐☐ 9-10/9

3. What was the capacity of your group home in 1974? ("CAPACITY" MEANS FOR JUVENILES RECEIVING TREATMENT ONLY. DO NOT INCLUDE STAFF.)

(Number) ____________________ 11-12/9

4. What was the average daily population of the home in 1974?

(Average daily population) ____________________ 13-14/9

5. What was the average length of stay for juveniles in the group home in 1974? (PLEASE GIVE TIME IN WEEKS. IF LESS THAN 1 WEEK, RECORD NUMBER OF DAYS.)

Weeks ☐☐ 15-16/9

Days ☐ 17/9

6. What was the total amount of the budget for operating the group home for the calendar year January 1, 1974 to December 31, 1974?

(Amount) ________________________ 18-23/9

7. What were the source(s) of funding for your home in 1974? (CIRCLE ALL THAT APPLY)

a. City funds	1	24/2
b. County funds	1	25/2
c. State social service	1	26/2
d. State mental health funds	1	27/2
e. Law and order funds (LEAA)	1	28/2
f. Church funds	1	29/2
g. Foundations	1	30/2
h. Individual contributions	1	31/2
i. Other (SPECIFY) ____________________ .	1	32/2

8. What was the overall daily cost per child in the home based on the average daily population?

(Average daily cost per child) ____________________ 33-35/9

Referrals

9. Please indicate the total number of juveniles referred to your group home during 1974 from the following sources (whether or not they were actually accepted by the home).

	Number Referred	
a. Juvenile Courts	____________	36-38/9
b. Mental Health Services	____________	39-41/9
c. Social Services	____________	42-44/9
d. Law Enforcement Agencies	____________	45-47/9
e. Self referrals	____________	48-50/9
f. Parents	____________	51-53/9
g. Juvenile Court Intake Services . . .	____________	54-56/9
h. Division of Youth Services	____________	7-59/9
i. Other (SPECIFY) ________________		
____________________________.	____________	60-62/9
TOTAL NUMBER REFERRED:	____________	63-65/9

10\.. Of the total number referred in 1974, how many were not accepted by the home?

(Number not accepted) ______________________ 66-68/9

11. Who has the final responsibility for determining whether a youth will be admitted to your group home? (CIRCLE ONE NUMBER ONLY)

Juvenile Judge 1

Department of Social Services 2

Admissions Committee or Advisory Board 3

Group Home Director 4

Group Home Staff Committee 5

Group Home Parents 6

Other (SPECIFY) ______________________ . 7 69/8

12. In cases where youths were referred to the home but not accepted for admission, please indicate how many were disapproved for each of the reasons given below. (THE TOTAL SHOULD EQUAL THE NUMBER GIVEN IN QUESTION 10)

	Number	
a. Alternative placement found which better fitted youth's needs	________	70-71/9
b. Youth indicated unwillingness to enter group living situation	________	72-73/9
c. Person(s) responsible for admissions felt youth would not benefit from program	________	74-75/9
d. Offense considered too serious for community program participation	________	76-77/9
		79-80/01 Card 02
e. Space not available	________	8-9/9
f. Other (SPECIFY) ______________________ .	________	10-11/9
Total	________	12-14/9

Client Profile

13. In total, how many juveniles were admitted to the group home during the calendar year 1974 (January 1, 1974 - December 31, 1974)? (THIS NUMBER SHOULD EQUAL THE TOTAL IN QUESTION 9, MINUS THE NUMBER IN QUESTION 10)

(Number) ______________________ 15-17/9

14. How many youths were admitted to the home in 1974 as a juvenile court disposition resulting directly from a judicial finding that the youths were delinquent or undisciplined?

(Number) ______________________ 18-20/9

15. Of the number given in question 12, how many of the youths were admitted for having committed Part I offenses (e.g., murder, forcible rape, breaking and entering, larceny, etc.)?

(Number) ______________________ 21-22/9

16. Of those admitted to the home in 1974 for Part I offenses, please indicate their distribution by the following age, sex, and racial characteristics.

	White Male	White Female	Non-White Male	Non-White Female	
a. 6 years of age up to 10	____	____	________	________	23-30/9
b. 10 years of age up to 13	____	____	________	________	31-38/9
c. 13 years of age up to 16	____	____	________	________	39-46/9
d. 16 years of age up to 18	____	____	________	________	47-54/9

17. Of the number given in Question 14, how many were admitted for having committed Part II offenses (e.g. forgery, malicious mischief, violation of drug or liquor law, disorderly conduct, etc., but not including "undisciplined offenses" of truancy, being ungovernable at home and runaways).

(Number) ______________________ 55-57/9

18. Of those admitted to the home in 1974 for Part II offenses, please indicate their distribution by the following age, sex and racial characteristics. (DO NOT INCLUDE "UNDISCIPLINED OFFENSES" OF TRUANCY, BEING UNGOVERNABLE AT HOME AND RUNNING AWAY.)

	White Male	White Female	Non-White Male	Non-White Female	
a. 6 years of age up to 10	____	____	____	____	58-65/9
b. 10 years of age up to 13	____	____	____	____	66-73/9
					79-80/02 Card 03
c. 13 years of age up to 16	____	____	____	____	8-15/9
d. 16 years of age up to 18	____	____	____	____	16-23/9

19. Of the number given in Question 14, how many were admitted to the home for the undisciplined offenses of truancy, being ungovernable at home or running away?

(Number) ______________________ 24-26/9

20. Of those admitted to the home in 1974 for undisciplined offenses, please indicate their distribution by the following age, sex, and racial characteristics.

	White Male	White Female	Non-White Male	Non-White Female	
a. 6 years of age up to 10	____	____	____	____	27-38/9
b. 10 years of age up to 13	____	____	____	____	39-50/9
c. 13 years of age up to 16	____	____	____	____	51-62/9
d. 16 years of age up to 18	____	____	____	____	63-74/9
					79-80/03

21. Of the total number of youths admitted to the home in 1974 (the number given in Question 13) how many were admitted for reasons other than the court's finding the youth delinquent or undisciplined? (THIS NUMBER SHOULD EQUAL THE NUMBER GIVEN IN QUESTION 13 MINUS THE NUMBER IN QUESTION 14). Card 04

(Number) ______________________ 8-9/9

Runaways & Terminations

22. Did you have any runaways from the group home in 1974?

No (SKIP TO Q. 25) . . 1

Yes 2 10/3

23. IF YES: How many runaways did you have? (PLEASE COUNT EACH YOUTH ONLY ONCE)

(Number) ________________ 11-12/9

24. How many youths ran away more than once?

(Number) ________________ 13-14/9

25. Were any youths petitioned to juvenile court in 1974 while enrolled in the group home?

No (SKIP TO Q. 27) . 1

Yes 2 15/3

26. IF YES: How many were petitioned to juvenile court in 1974 while enrolled in the home?

(Number) ________________ 16-17/9.

27. Were any of the youths terminated in 1974 before their treatment period was completed?

No (SKIP TO Q. 30). 1

Yes 2 18/3

28. IF YES: How many were terminated before their treatment period was completed?

(Number) ________________ 19-20/9

29. What was the most common reason for early termination? (CIRCLE ONE ONLY)

Thought child would benefit more from a different kind of program 1

Committed additional offenses 2

Own parents requested their return home. 3

Other (SPECIFY) ____________________ . 4 21/5

Staffing Profile

30. Please indicate below how many persons were on the paid staff of the group home as of December 31, 1974. (IF NO SUCH POSITION EXISTED INDICATE WITH A ZERO ("0"), DO NOT LEAVE ANY LINE BLANK)

	Number Full-Time	Number Part-Time	
a. Director(s)			22-25/9
b. Social worker(s)			26-29/9
c. Psychologist(s)			30-33/9
d. Male houseparent(s) (Teaching parents). .			34-37/9
e. Female houseparent(s)			38-41/9
f. Counselor(s)			42-45/9
g. Male relief parent(s)			46-49/9
h. Female relief parent(s)			50-53/9
i. Cook(s)			54-57/9
j. Clerical(s)			58-61/9
k. Other (SPECIFY) ____________________ .			62-65/9
TOTAL:			66-69/9 79-80/04

31. What is the authorized salary for full-time positions in the following categories? Card 05

	Lowest	Highest	
a. Director(s)			8-17/9
b. Social worker(s)			18-27/9
c. Psychologist(s)			28-37/9
d. Male houseparent(s) (Teaching parents).			38-47/9
e. Female houseparent(s)			48-57/9
f. Counselor(s)			58-67/9
g. Male relief parent(s)			68-77/9 79-80/05 Card 06
h. Female relief parent(s)			8-17/9
i. Cook(s)			18-27/9
j. Clerical(s)			28-37/9
k. Other (SPECIFY) ____________________.			38-47/9 48-57/9

32. How many persons in each of the following categories left the employ of the group home during 1974?

	Number	
a. Director(s)	______	58/9
b. Social worker(s)	______	59/9
c. Psychologist(s)	______	60/9
d. Male houseparent(s) (Teaching parents). . .	______	61/9
e. Female houseparent(s)	______	62/9
f. Counselor(s).	______	63/9
g. Male relief parent(s)	______	64/9
h. Female relief parent(s)	______	65/9
i. Cook(s)	______	66/9
j. Clerical(s)	______	67/9
k. Other (SPECIFY) ____________________ .	______	68/9
TOTAL:	______	69-70/9

33. Please indicate the educational level of the houseparents in your group home in 1974 (those who were houseparents as of December 31, 1974). (CIRCLE ONE NUMBER ONLY IN EACH COLUMN)

	Male Parent	Female Parent	
Less than high school	1	1	
High school diploma or GED	2	2	
Some college, no degree	3	3	
A.A. or A.S. degree	4	4	
B.A. or B.S. degree or higher . . .	5	5	71-72/6

79-80/06

34. How many of the paid staff members received some in-service training in 1974? Card 07

	Number Full-Time Staff	Number Part-Time Staff	
a. Director(s)	________	________	8-11/9
b. Social worker(s)	________	________	12-15/9
c. Psychologist(s)	________	________	16-19/9
d. Male houseparent(s)	________	________	20-23/9
e. Female houseparent(s)	________	________	24-27/9
f. Counselor(s).	________	________	28-31/9
g. Male relief parents	________	________	32-35/9
h. Female relief parents	________	________	36-39/9
i. Other (SPECIFY) __________.	________	________	40-43/9

35. How many volunteers participated in the group home program in 1974?

(Number) ______________________ 44-46/9

36. What services did the volunteers perform? (CIRCLE ALL THAT APPLY)

a. Counseling	1	47/2
b. Recreation	1	48/2
c. Transportation services	1	49/2
d. Other (SPECIFY) ______________ __________________________.	1	50/2

37. How many children who were in the home during 1974 had a volunteer assigned to them on a one-to-one basis?

(Number) ________________________ 51-52/9

Program Information

38. In providing services for youths in the home during 1974, which other community agencies did you work with? (CIRCLE ALL THAT APPLY)

a. Department of Social Services	1	53/2
b. Juvenile Court Counselors	1	54/2
c. Mental Health Services	1	55/2
d. Law Enforcement (Police & Sheriff).	1	56/2
e. Schools	1	57/2
f. Youth Services Bureau	1	58/2
g. Other (SPECIFY) ________________________ .	1	59/2

39. Did you have an advisory board for the group home that year?

No	1	
Yes	2	60/3

40. What treatment model(s) were employed by the group home program during that year? (CIRCLE ALL THAT APPLY)

a. Behavior modification	1	61/2
b. Individual & group counseling	1	62/2
c. Family counseling	1	63/2
d. Parent effectiveness training techniques . .	1	64/2
e. Reality therapy	1	65/2
f. Guided group interaction	1	66/2
g. Positive peer culture	1	67/2
h. Other (SPECIFY) ________________________ .	1	68/2

41. Did the home have a follow-up procedure after a child had been released?

No 1

Yes . . . 2 69/3

42. Did the group home operate a formal non-residential treatment program for referrals which are not placed in the home?

No (SKIP TO Q. 44) . 1

Yes 2 70/3

43. IF YES: How many clients did the non-residential treatment program serve in 1974?

(Number) ____________________ 71-72/9

44. On the basis of your experience in this field, do you have any comments or suggestions you wish to make to help improve delinquency prevention and juvenile justice services in North Carolina? Please use the space provided below. Use additional sheets of paper if needed.

☐☐ 73-74/9

THANK YOU VERY MUCH FOR YOUR ASSISTANCE 79-80/07

Sept.-Oct., 1975 ID No. ______

JUVENILE JUSTICE NON-RESIDENTIAL SERVICES QUESTIONNAIRE

Name of Person Filling Out the Questionnaire:

____

Position: ______________________________

Non-Residential Service: ______________________________

Address: ______________________________

Telephone Number: ______________________________

GENERAL INSTRUCTIONS

1. Please note that although this questionnaire is meant to include all agencies performing non-residential youth services, we have used the term "youth services program" throughout. Please answer in terms of your non-residential service.

2. PLEASE RETURN THIS DATA INSTRUMENT WITHIN 14 (FOURTEEN) WORKING DAYS DIRECTLY TO ANNE BRYAN, YOUTH PROGRAMS CHIEF, LAW AND ORDER SECTION, DEPARTMENT OF NATURAL AND ECONOMIC RESOURCES, P.O. BOX 27687, RALEIGH, N.C. 27611.

3. This data instrument has been designed with the intent of compiling information essential for improving youth services in North Carolina. Please answer questions carefully. Your response will be considered the official report of your non-residential youth service.

4. Please answer all questions in reference to calendar year 1974.

5. If you do not understand what a question means, or you do not know how to answer it, call Anne Bryan at 919/829-7974.

6. Questions can be answered by:
    a. Circling a code number opposite an answer, not the answer itself.
       Example: Yes . . . 1
       No . . . [✓ 2]
    b. Writing a number on a line. (Example: __15__)
    c. Entering a code on a line:
       __0__ for "None" or "Not Applicable"
       __NA__ for "Information Not Available"

7. Please ignore the numbers in the margin of each page. These are card and column indicators to be used in data processing.

Client Population and Budget

1. What was the total number of youths served by your youth services program during 1974?

(Number) ______________________

2. What was the average number of clients served daily?

(Number) ______________________

3. What was the average length of time a case remained active? (GIVE THE TIME IN WEEKS. IF LESS THAN 1 WEEK, RECORD THE NUMBER OF DAYS.)

Weeks ☐☐

Days ☐

4. What was the total amount of the budget for operating the youth services program in 1974?

(Amount) ______________________

5. What were the source(s) of funding for your youth services program in 1974? (CIRCLE ALL THAT APPLY)

a. City funds	1
b. County funds	1
c. State social service	1
d. State mental health funds	1
e. Law and order funds (LEAA)	1
f. Church funds	1
g. Foundations	1
h. Individual contributions	1
i. Other (SPECIFY) ______________________	1

6. What was the overall daily cost per child based on the average number of clients served daily?

(Average daily cost per child) ______________________

Referrals

7. Please indicate the total number of juveniles referred to your youth services program during 1974 from the following sources (whether or not they were actually accepted as clients by the bureau).

	Number Referred
a. Juvenile Courts	
b. Mental Health Services	
c. Social Services	
d. Law Enforcement Agencies	
e. Self referrals	
f. Parents	
g. Juvenile Court Intake Services	
h. Division of Youth Services	
i. Other (SPECIFY) ____________________.	
Total Number Referred:	

8. Of the total number referred in 1974, how many were not accepted by the youth services program?

(Number not accepted) ______________________

9. In cases where youth were referred to the youth services program but not accepted as a client, please indicate how many were disapproved for each of the reasons given below. (THE TOTAL SHOULD EQUAL THE NUMBER GIVEN IN QUESTION 8)

	Number
a. Alternative service found which better fitted youth's needs	
b. Youth indicated unwillingness to accept youth services	
c. Case load too crowded	
d. Other (SPECIFY)________________________ .	
Total	

Client Profile

10. Of the total number of youths served by your program in 1974 (THE NUMBER GIVEN IN QUESTION #1), how many were served as a direct result of court findings that the youths were delinquent or undisciplined?

(Number) ____________________

11. Of the number given in Question 10, how many of the youths were served as a result of having committed Part I offenses (e.g., murder, forcible rape, breaking and entering, larceny, etc.)

(Number) ____________________

12. Of those clients served in 1974 as a result of having committed Part I offenses, please indicate their distribution by the following age, sex and racial characteristics.

	White Male	White Female	Non-White Male	Non-White Female
a. 6 years of age up to 10				
b. 10 years of age up to 13				
c. 13 years of age up to 16				
d. 16 years of age up to 18				

13. Of the number given in Question 10, how many were served as a result of having committed Part II offenses (e.g., forgery, malicious mischief, violation of drug or liquor law, disorderly conduct, etc., but not including "undisciplined offenses" of truancy, being ungovernable at home and running away).

(Number) ____________________

14. Of those clients served in 1974 as a result of having committed Part II offenses, please indicate their distribution by the following age, sex and racial characteristics. (DO NOT INCLUDE "UNDISCIPLINED OFFENSES" OF TRUANCY, BEING UNGOVERNABLE AT HOME AND RUNNING AWAY)

	White Male	White Female	Non-White Male	Non-White Female
a. 6 years of age up to 10				
b. 10 years of age up to 13				
c. 13 years of age up to 16				
d. 16 years of age up to 18				

15. Of the number given in Question 10, how many of the youths were served as a result of their having committed the undisciplined offenses of truancy, being ungovernable at home or running away?

(Number) ____________________

16. Of those clients served in 1974 as a result of their having committed undisciplined offenses, please indicate their distribution by the following age, sex, and racial characteristics.

	White Male	White Female	Non-White Male	Non-White Female
a. 6 years of age up to 10				
b. 10 years of age up to 13				
c. 13 years of age up to 16				
d. 16 years of age up to 18				

17. Of the total number of youths served by your program in 1974 (the number given in Question #1), how many were accepted as clients for reasons other than the courts finding the youth delinquent or undisciplined? (THIS NUMBER SHOULD EQUAL THE NUMBER GIVEN IN QUESTION #1 MINUS THE NUMBER IN QUESTION #10)

(Number) ____________________

Staffing Profile

18. Please indicate below how many persons were on the paid staff of the youth services program as of December 31, 1974. (IF NO SUCH POSITION EXISTED INDICATE WITH A ZERO ("0"). DO NOT LEAVE ANY LINE BLANK.)

	Number Full-Time	Number Part-Time
a. Director(s)		
b. Social worker(s)		
c. Psychologist(s)		
d. Counselor(s)		
e. Clerical personnel . . .		
f. Other (SPECIFY) ________ ____________________.		
Total:		

19. What was the average daily case load of each counselor?

(Average daily case load) ______________________________

20. What is the authorized salary for full-time positions in the following categories?

	Lowest	Highest
a. Director(s)		
b. Social worker(s) . .		
c. Psychologist(s) . . .		
d. Counselor(s).		
e. Clerical personnel .		
f. Other (SPECIFY) ____________________.		

21. How many persons in each of the following categories left the employ of the youth services program during 1974?

	Number
a. Director(s)	______
b. Social worker(s)	______
c. Psychologist(s)	______
d. Counselor(s)	______
e. Clerical personnel . . .	______
f. Other (SPECIFY) ________	
______________________.	______

22. How many of the paid staff members received some in-service training in 1974?

	Number Full-Time Staff	Number Part-Time Staff
a. Director(s)	______	______
b. Social worker(s) . . .	______	______
c. Psychologist(s)	______	______
d. Counselor(s)	______	______
e. Other (SPECIFY) _____		
______________________.	______	______
Total:	______	______

23. How many volunteers participated in your youth services program in 1974?

(Number) ________________________

24. What services did the volunteers perform? (CIRCLE ALL THAT APPLY)

a. Counseling 1

b. Recreation 1

c. Transportation services . 1

d. Other (SPECIFY) ________

________________________. 1

25. How many children who were served by your youth services program in 1974 had a volunteer assigned to them on a one-to-one basis?

(Number) ________________________

Program Information

26. In providing services to clients of your program in 1974, which other community agencies did you work with? (CIRCLE ALL THAT APPLY)

a. Department of Social Services 1

b. Juvenile Court Counselors 1

c. Mental Health Services 1

d. Law Enforcement (Police & Sheriff) . . . 1

e. Schools 1

f. Other Youth Services Bureau 1

g. Other (SPECIFY) ____________________ . 1

27. Did you have an advisory board for the youth services program that year?

Yes 1

No 2

28. What treatment model(s) were employed by your youth services program during that year? (CIRCLE ALL THAT APPLY)

a. Behavior modification 1
b. Individual & group counseling 1
c. Family counseling 1
d. Parent effectiveness training techniques. 1
e. Reality therapy 1
f. Guided group interaction 1
g. Positive peer culture 1
h. Other (SPECIFY) ____________________ . 1

29. Did you have a formal crisis intervention program in 1974?

Yes 1
No (SKIP TO Q. 31) 2

30. IF YES: How many youths were served by such a program?

(Number) ____________________

31. Did your youth services program have a follow-up procedure after a client has been released from the program?

Yes 1
No 2

32. On the basis of your experience in this field, do you have any comments or suggestions you wish to make to help improve delinquency prevention and juvenile justice services in North Carolina? Please use the space provided below. Use additional sheets of paper if needed.

THANK YOU VERY MUCH FOR YOUR ASSISTANCE

Sept.-Oct., 1975 ID No. ________

JUVENILE DETENTION CENTER QUESTIONNAIRE

Name of Person Filling Out this Questionnaire:

____

Position: ________________________________

Detention Center: ________________________

Address: ________________________________

Telephone Number: ________________________

GENERAL INSTRUCTIONS

1. PLEASE RETURN THIS DATA INSTRUMENT WITHIN 14 (FOURTEEN) WORKING DAYS DIRECTLY TO ANNE BRYAN, YOUTH PROGRAMS CHIEF, LAW AND ORDER SECTION, DEPARTMENT OF NATURAL AND ECONOMIC RESOURCES, P.O. BOX 27687, RALEIGH, N.C. 27611.

2. This data instrument has been designed with the intent of compiling information essential for improving youth services in North Carolina. Please answer questions carefully. Your response will be considered the official report of your residential facility.

3. Please answer all questions in reference to calendar year 1974.

4. If you do not understand what a question means, or you do not know how to answer it, call Anne Bryan at 919/829-7974.

5. Questions can be answered by:
    a. Circling a code number opposite an answer, not the answer itself.
       Example: Yes . . . 1
       No . . . 2
    b. Writing a number on a line. (Example: 15)
    c. Entering a code on a line:
       0 for "None" or "Not Available"
       NA for "Information Not Available"

6. Please ignore the numbers in the margin of each page. These are card and column indicators to be used in data processing.

Capacity and Budget

1. How many beds did you have in the detention center in 1974?

(Number) ______________________

2. How many of the total number of beds were in single rooms?

(Number) ______________________

3. What was the total number of youths admitted to the detention center in 1974?

(Number) ______________________

4. Of those admitted to the home, please indicate their distribution by the following age, sex and racial characteristics.

	White Male	White Female	Non-White Male	Non-White Female
a. 6 years of age up to 10				
b. 10 years of age up to 13				
c. 13 years of age up to 16				
d. 16 years of age up to 18				

5. Were juveniles separated by age in the center in 1974?

Yes . . . 1

No . . . 2

6. What was the average daily population of juveniles in the center?

(Number) ______________________

7. What was the average length of stay for a juvenile in the center in 1974? (PLEASE GIVE THE TIME IN NUMBER OF DAYS)

Days ☐☐

8. What was the total budget for the detention center in 1974?

(Amount) ____________________

9. What was the average cost per day for a juvenile?

(Cost per day) ____________________

Runaways

10. How many of the juvenile detainees at the center in 1974 were runaways from training schools?

(Number) ____________________

11. Please indicate which of the following methods of security were in use in the detention center in 1974? (CIRCLE ONE CODE NUMBER FOR EACH ITEM)

	Yes	No
a. Electronic monitoring	1	2
b. Locking of individual doors . . .	1	2
c. Locking of the facility	1	2
d. Supervision by custodial (security) personnel	1	2
e. Other (Specify) ______________ ____________________ .	1	2

Staffing Profile

12. Please indicate how many persons were on the paid staff of the detention center as of December 31, 1974. (IF NO SUCH POSITION EXISTED INDICATE WITH A ZERO ("0"). DO NOT LEAVE ANY LINE BLANK.)

	Number Full-Time	Number Part-Time
a. Director(s)		
b. Social worker(s)		
c. Psychologist(s)		
d. Counselor(s)		
e. Custodial (security) pers..		
f. Cook(s)		
g. Clerical personnel		
h. Other (SPECIFY) ________ ________________________.		
Total		

13. What is the authorized salary for full-time positions in the following categories?

	Lowest	Highest
a. Director(s)		
b. Social worker(s)		
c. Psychologist(s)		
d. Counselor(s)		
e. Custodial personnel		
f. Cook(s)		
g. Clerical personnel		
h. Other (SPECIFY)____________ .		

14. How many persons in each of the following categories left the employ of the detention center during 1974?

	Number
a. Director(s)	______
b. Social worker(s)	______
c. Psychologist(s)	______
d. Counselor(s)	______
e. Custodial (security) pers. .	______
f. Cook(s)	______
g. Clerical personnel	______
h. Other (SPECIFY) __________	
______________________.	______

15. How many of the paid staff members received some in-service training in 1974?

	Number Full-Time Staff	Number Part-Time Staff
a. Director(s)	______	______
b. Social worker(s)	______	______
c. Psychologist(s)	______	______
d. Counselor(s)	______	______
e. Other (SPECIFY) ______		
____________________.	______	______

Program Information

16. Did you have a citizens advisory board for the detention center in 1974?

Yes . . .	1
No . . .	2

17. Please indicate whether or not the detention center provided any of the following programs in 1974. (CIRCLE ONE CODE NUMBER ON EACH LINE)

	Yes	No
a. Educational	1	2
b. Counseling	1	2
c. Religious	1	2
d. Recreational	1	2
e. Other (SPECIFY) _________________ .	1	2

18. How many juveniles participated in each of the programs that year? (FOR ANY PROGRAM NOT OFFERED BY THE CENTER PLACE A ZERO ("0") ON THE LINE FOR THAT PROGRAM. DO NOT LEAVE ANY LINE BLANK.)

	Number of Participants
a. Educational	___________
b. Counseling	___________
c. Religious	___________
d. Recreational	___________
e. Other (SPECIFY) _____ ____________________.	___________

19. How many volunteers assisted with programs at the detention center in 1974?

(Number) ______________________

20. With which programs did the volunteers give assistance? (CIRCLE ALL THAT APPLY)

a. Educational 1
b. Counseling 1
c. Religious 1
d. Recreational 1
e. Other (SPECIFY) ______
__________________: 1

21. How many children in the detention center had a volunteer assigned to them on a one-to-one basis?

(Number) ______________________

22. Did the center have a follow-up procedure after a juvenile had been released?

Yes 1
No 2

23. On the basis of your experience in this field, do you have any comments or suggestions you wish to make to help improve delinquency prevention and juvenile justice services in North Carolina? Please use the space provided below. Use additional sheets of paper if needed.

☐☐

467-19

Sept.-Oct., 1975

ID No. ________

JUVENILE TRAINING SCHOOLS AND COURT COUNSELORS QUESTIONNAIRE

Name of Person Filling Out this Questionnaire:

____

Position: ______________________________

Name of Unit: ______________________________

Address: ______________________________

Telephone Number: ______________________________

GENERAL INSTRUCTIONS

1. PLEASE RETURN THIS DATA INSTRUMENT WITHIN 14 (FOURTEEN) WORKING DAYS TO ANN BRYAN, STATE OF NORTH CAROLINA, DEPT. OF NATURAL & ECONOMIC RESOURCES, LAW & ORDER SECTION, P.O. BOX 27687, RALEIGH, N.C. 27611. A STAMPED SELF-ADDRESSED ENVELOPE IS ENCLOSED FOR YOUR CONVENIENCE.

2. Please note that this questionnaire is designed to be used by both training schools and Juvenile Probation offices (court counselors). We have used the term "unit" throughout which is meant to apply to both. Please answer in terms of your institution/office.

3. This data instrument is for the purpose of compiling statewide information on criminal justice agencies. These data will be particularly useful in planning. Please answer questions carefully. Your response will be considered an official report of your unit.

4. This questionnaire has been designed for FAST COMPLETION. Most questions can be answered by:
    a. Circling a code number opposite an answer, not the answer itself.
       Example: Yes . . . 1
       No . . . ②
    b. Writing a number on a line (Example: 15).
    c. Entering a code on a line:
       0 for "None" or "Not Applicable"
       NA for "Information Not Available"

5. Please answer every question. If an item is really not available or does not exist, you should reply with one of the codes listed in 4-c above. THERE SHOULD BE NO BLANKS LEFT FOR ANY QUESTION UNLESS THERE ARE SPECIFIC INSTRUCTIONS WITHIN THE QUESTIONNAIRE TO SKIP CERTAIN QUESTIONS.

6. Please ignore the numbers in the margin of each page. These are card and column indicators to be used in data processing.

7. If you do not understand what a question means, or you do not know how to answer it, please call Ann Bryan, Youth Program Chief, Law and Order Section, North Carolina Department of Natural and Economic Resources in Raleigh. (919/829-7974)

Sept.-Oct., 1975 ID No.__________

Many of the questions in this instrument deal with position categories of personnel as defined below (even though the categories may not be your usual terminology for these positions). In questions referring to "Line" personnel, all categories with an asterisk should be included; "Professional" personnel should include only those positions listed under the category "Professional & Technical Personnel". "Support" means only personnel employed in positions in clerical, maintenance, farm, food services, and like activities. PLEASE REFER BACK TO THESE DEFINITIONS IF NECESSARY IN ANSWERING QUESTIONS IN WHICH POSITION CATEGORIES APPEAR.

*Top Administration/Top Management - Training School Directors, Assistant Training School Directors, Chief Court Counselors.

*Middle Level Management - Cottage life directors.

*First Line Supervisory - Cottage parent supervisors, nurse supervisors, maintenance supervisors, food service supervisors, principals, juvenile evaluation supervisors, court counselors III.

*First Line Staff - Cottage parents, teachers, vocational teachers, juvenile evaluation counselors (social workers), court counselors II & I, court counselor trainees, intake counselors, volunteer coordinators.

Professional & Technical Personnel - Psychologists, psychiatrists, medical doctors, nurses, therapists, recreational specialists, psychometrists, psychological assistants (other than those whose duties are mainly administrative or supervisory).

General Support Personnel - Clerical, plant and maintenance, food services, farm storeroom, transportation, administrative assistants, etc.

All Others - Print shop trade supervisors.

Budget

1. What is the total budget for your unit for fiscal year 1976--(July 1, 1975 to June 30, 1976) excluding capital outlays such as construction?

(Total budget) ____________________

2. What is your total unit budget for personnel expenses for fiscal year 1976 (salaries, benefits, etc., but not including training)?

(Total personnel budget) ________________

3. What is your total unit training budget for fiscal year 1976 (excluding capital outlays and pay of trainees)?

(Total training budget) ________________

Personnel Profile

4. What is the total number of full-time personnel positions that are authorized in your unit budget during fiscal year 1975-76?

	Number
a. Line	________
b. Professional	________
c. Support	________
Total	________

5. How many of these were new positions authorized as of July 1, 1975?

	Number
a. Line	________
b. Professional	________
c. Support	________
Total	________

6. What was the total number of full-time personnel actually employed in your unit as of July 1, 1975? (Please include full-time contractual persons.)

Number

a. Line ________

b. Professional ________

c. Support ________

Total ________

7. What was the total number of part-time paid personnel, including contract personnel, actually employed by your unit as of July 1, 1975?

Number

a. Line ________

b. Professional ________

c. Support ________

Total ________

8. Please indicate below the number of part-time unpaid personnel (volunteers) in your unit as of July 1, 1975.

Number

a. Line ________

b. Professional ________

c. Support ________

Total ________

9. How many full-time line personnel in your unit were separated during fiscal year 1974-75 for the following reasons: (AS APPEAR IN YOUR RECORDS)

Number

a. Death . . . . ________

b. Resignation . . . . ________

c. Retirement . . . . ________

d. Dismissal . . . . ________

e. Other (SPECIFY) ______

____________________ ________

VI-341 Total ________

10. Please indicate the length of service in the criminal justice system of full-time line personnel in your unit as of July 1, 1975. (THE TOTAL GIVEN HERE SHOULD BE THE SAME AS THE NUMBER IN QUESTION 6a)

	Number of Personnel
a. Less than 6 months	
b. 6 months up to (but not including) 1 year.	
c. 1 year up to 3 years	
d. 3 years up to 5 years	
e. 5 years up to 10 years	
f. 10 years up to 15 years	
g. 15 years up to 25 years	
h. 25 years and over	
Total	

11. Please give the number of full-time line personnel in your unit as of July 1, 1975, whose ages fall within the following ranges: (AGAIN, THE TOTAL SHOULD BE THE SAME AS THAT IN Q. 6a)

	Number of Personnel
a. Under 25 years of age	
b. Twenty-five up to (but not including 30) years of age . . .	
c. Thirty up to 40 years of age . .	
d. Forty up to 50 years of age . . .	
e. Fifty up to 60 years of age . . .	
f. Sixty up to 65 years of age . . .	
g. Sixty-five and over	
Total:	

12. How was your total full-time personnel, including contractual personnel, distributed within the position categories as of July 1, 1975? (THE TOTAL SHOULD BE THE SAME AS THE TOTAL IN QUESTION 6. REFER BACK TO PAGE 1, IF NECESSARY FOR LIST OF POSITIONS TO BE INCLUDED IN EACH CATEGORY.)

Number

a. Top administration/top management . . . . . ________

b. Middle level management . . . . ________

c. First line supervisory . . . . ________

d. First line staff . . . . ________

e. Professional & technical personnel . . . . ________

f. General support personnel . . . . ________

g. All others . . . . ________

Total ________

13. How was your total number of part-time paid personnel, including contract personnel, distributed within the position categories as of July 1, 1975? (THE TOTAL SHOULD BE THE SAME AS THE TOTAL IN QUESTION 7)

Number

a. Top administration/top management . . . . . . ________

b. Middle level management . . . . ________

c. First line supervisory . . . . ________

d. First line staff . . . . ________

e. Professional & technical personnel . . . . . ________

f. General support personnel . . . . ________

g. All others . . . . ________

Total ________

14. Now, please give the number of paid personnel (both full and part time) as of July 1, 1975 in your unit assigned specifically to duty positions performing the following functions: (INCLUDE HERE ALL PAID PERSONNEL INCLUDING CONTRACTUAL PERSONNEL, IN THE FUNCTION IN WHICH THEY SPEND 50% -- OR MOST -- OF THEIR TIME. DO NOT COUNT ANY INDIVIDUAL MORE THAN ONCE. PLEASE PUT A ZERO ("0") ON ANY LINE IN WHICH YOU HAVE NO PERSONNEL PERFORMING THAT FUNCTION. THE OVERALL TOTALS FOR "FULL TIME" AND "PART TIME" ALTHOUGH TALLIED DIFFERENTLY, SHOULD AGREE WITH THOSE IN QUESTIONS 12 AND 13.)

	Number of Persons Full Time	 Part Time
a. Top administrative functions	________	________
b. Other administrative functions	________	________
c. Staff supervisory functions	________	________
d. Case work functions	________	________
e. Cottage parental functions	________	________
f. Intake screening	________	________
g. Classification functions	________	________
h. Mental health services	________	________
i. Medical services (also therapy)	________	________
j. Academic services	________	________
k. Vocational services	________	________
l. Recreational services	________	________
m. Volunteer coordination functions	________	________
n. General clerical, secretarial	________	________
o. Maintenance & food service functions	________	________
p. Transportation functions	________	________
q. Other (SPECIFY) ______________________.	________	________
TOTALS	________	________

15. Please give the number of full-time personnel in your unit, as of July 1, 1975, for each of the following sex and race distributions. (THE TOTAL IN EACH CATEGORY SHOULD EQUAL THE NUMBERS GIVEN IN Q. 12)

	Male White	Male Non-White	Female White	Female Non-White	Totals
a. Top admin./top management . .					
b. Middle level management . . .					
c. First line supervisory . . .					
d. First line staff					
e. Prof. & tech. personnel . . .					
f. General support personnel . .					
g. All others					
			Grand Total		

16. How many new personnel positions within your unit have been created with funds from the Committee on Law and Order (LEAA) since Jan. 1, 1969?

(Number) ____________________

17. Of these positions, please give the numbers which have been continued, have been dropped and which are presently funded by Law and Order (LEAA) as indicated below. (THE TOTAL SHOULD EQUAL THE TOTAL SHOWN IN QUESTION 16)

	Number
a. Already continued with state, county or city funds	
b. Dropped when Law and Order (LEAA) funds stopped	
c. Presently funded with Law and Order (LEAA) funds	
Total	

Salaries

18. What is the authorized annual salary range for the following full-time positions in your unit?

	Lowest Salary	Highest Salary
a. Training School Director, Chief Court Counselor		
b. Cottage Life Director		
c. Juvenile Evaluation Supervisor, Court Counselor III		
d. Juvenile Evaluation Counselors, Court Counselor I		

19. How many full-time line personnel in your unit were in the following salary ranges as of July 1, 1975? (THE TOTAL SHOULD EQUAL THE NUMBER IN QUESTION 6a.)

	Number
a. $6,000 up to (but not including) $6,500	
b. $6,500 up to $7,000 . . .	
c. $7,000 up to $8,000 . . .	
d. $8,000 up to $9,000 . . .	
e. $9,000 up to $10,000 . . .	
f. $10,000 up to $12,000 . .	
g. $12,000 up to $15,000 . .	
h. $15,000 up to $20,000 . .	
i. $20,000 and over	
Total	

Education

20. How many full-time line personnel in your unit as of July 1, 1975 had completed the following levels of education? (THE GRAND TOTAL SHOULD EQUAL THE NUMBER GIVEN IN QUESTION 6a)

	Less Than High School	High School or GED	Some College No Degree	AA,AS Degree	BA,BS Degree	Grad. Degree	Totals
a. Top admin./top management . .	____	____	____	____	____	____	____
b. Middle level management . .	____	____	____	____	____	____	____
c. First line supervisory .	____	____	____	____	____	____	____
d. First line staff	____	____	____	____	____	____	____
					Grand Total		____

21. How many full-time line employees in your unit are now enrolled in an educational or college program?

	GED	Two Year Degree	Four Year Degree	Graduate Degree
a. Top admin./top management	____	____	____	____
b. Middle level management	____	____	____	____
c. First line supervisory	____	____	____	____
d. First line staff	____	____	____	____

22. Please give the number of paid full-time personnel in the following categories in your unit who received formal in-service training (NOT OJT OR BASIC) in the last fiscal year - July 1, 1974 to June 30, 1975. (BE SURE TO INCLUDE THE NUMBER WHO RECEIVED NO IN-SERVICE TRAINING IN THE FIRST COLUMN.)

	Received No In-service Training	1-16 Hours	17-39 Hours	40 hours or more
a. Top admin./top management . .				
b. Middle level management . . .				
c. First line supervisory . . .				
d. First line staff				
e. Professional & technical personnel				
f. General support personnel . .				
g. All others				

23. Do you employ former juvenile offenders within your unit?

Yes . . . 1

No . . . 2

24. How many former juvenile offenders were employed as of July 1, 1975?

(Number) ____________________

25. This is to certify that the information included within this data instrument is accurate to the best of my knowledge and belief and is appropriate for use in publications showing data pertaining to the criminal justice system in North Carolina.

____
Official Authorized to
Complete This Data
Instrument

THANK YOU FOR YOUR ASSISTANCE

ADDENDUM D

State Level Law Enforcement Agency Questionnaire

Sept.-Oct., 1975 ID ________

STATE-LEVEL LAW ENFORCEMENT AGENCY QUESTIONNAIRE

Name of Person Filling Out this Questionnaire:

____

Position: ____

Department: ____

Telephone Number: ____

Sept.-Oct., 1975 ID __________

Personnel Profile

1. What is the total number of full-time personnel positions that are authorized in your department budget during fiscal year 1975-76?

Number

a. Sworn positions __________

b. Unsworn positions __________

Total __________

2. How many of these were new positions authorized as of July 1, 1975?

Number

a. Sworn positions __________

b. Unsworn positions __________

Total __________

3. What was the total number of full-time personnel actually employed in your department as of July 1, 1975?

Number

a. Sworn positions __________

b. Unsworn positions __________

Total __________

4. What was the total number of part-time paid personnel actually employed in your department as of July 1, 1975?

Number

a. Sworn positions __________

b. Unsworn positions __________

Total __________

5. How many full-time sworn personnel left your department during fiscal year 1974-75 for the following reasons:

Number

a. Death . . . . ________

b. Resignation . . . . . ________

c. Retirement . . . . ________

d. Dismissal . . . . . . ________

e. Other (SPECIFY)

________________ . ________

6. Please indicate the length of law enforcement service of full-time sworn personnel in your department as of July 1, 1975. (THE TOTAL GIVEN HERE SHOULD BE THE SAME AS THE NUMBER IN QUESTION 3, Part "a")

Number of Personnel

a. Less than 1 year . . . . ________

b. 1 year up to (but not including) 3 years . . . . ________

c. 3 years up to 5 years . . . . ________

d. 5 years up to 10 years . . . . ________

e. 10 years up to 15 years . . . . ________

f. 15 years up to 25 years . . . . ________

g. 25 years and over . . . . ________

Total ________

7. Please give the number of full-time sworn personnel in your department as of July 1, 1975, whose ages fall within the following ranges? (AGAIN, THE TOTAL SHOULD BE THE SAME AS "a", QUESTION 3)

	Number of Personnel
a. Under 25 years of age	______________
b. Twenty-five up to (but not including) 30 years of age	______________
c. Thirty up to 40 years of age	______________
d. Forty up to 50 years of age	______________
e. Fifty up to 60 years of age	______________
f. Sixty up to 65 years of age	______________
g. Sixty-five and over	______________
Total	______________

PLEASE NOTE
Many of the following questions deal with position categories of full-time personnel as defined below. PLEASE REFER BACK TO THESE DEFINITIONS IF NECESSARY IN ANSWERING ALL QUESTIONS IN WHICH SUCH CATEGORIES APPEAR.

Top Administration/Top Management - Colonels, Lt. Colonels, Directors, Asst. Directors, Section Chiefs, Asst. Section Chiefs.

General Command/Middle Level Management - All sworn officers above the rank of sergeant and below rank of Lt. Col., SBI Supervisors, SBI Training/Planning Officers, Regional Rangers/Supervisors.

First Line Supervisory - All sergeants, ABC Supervisors, License and Theft Supervisors, Wildlife & Marine Supervisors and Asst. Supervisors, District Rangers, SBI Lead Agents.

First Line Law Enforcement Officers - Patrolmen, Agents, Investigators, Sworn Technicians, Troopers, Protectors, Rangers, Inspectors.

Professional and Technical Civilian Personnel - Unsworn Administrative Assistants, Unsworn Technicians, Civilian Pilots.

Other Civilian Personnel/Support Personnel - Stenographers, Clerks, Maintenance Personnel.

All Others - (SPECIFY) ____

8. How was your total full-time personnel distributed within the position categories, as of July 1, 1975? (THE TOTAL SHOULD BE THE SAME AS THE TOTAL IN QUESTION 3)

Number

a. Top Administration/Top Management . . . . __________

b. General Command/Middle Level Management . . . __________

c. First Line Supervisory . . . . __________

d. First Line Law Enforcement Officers . . . . . __________

e. Professional & Technical Civilian Personnel . __________

f. Other Civilian Personnel/Support Personnel . __________

g. All Others . . . . __________

Total __________

9. Now, please give the number of full-time personnel (both sworn and unsworn) in your department assigned specifically to duty positions performing the following functions: (INCLUDE HERE SWORN OFFICERS, AND/OR CIVILIAN PERSONNEL IN THE FUNCTION IN WHICH THEY SPEND 50% (OR MOST) OF THEIR TIME -- DO NOT COUNT AN INDIVIDUAL MORE THAN ONCE. PLEASE PUT A ZERO ("0") ON ANY LINE IN WHICH YOU HAVE NO PERSONNEL PERFORMING THAT FUNCTION.

	Number of Persons	
	Sworn	Unsworn
a. Top administrative functions	______	______
b. Administrative assistance functions (not stenographers or clerical support).	______	______
c. Training functions	______	______
d. Planning functions	______	______
e. Personnel functions	______	______
f. Internal affairs/inspection functions	______	______
g. Traffic control/accident investigation	______	______
h. General patrol (other than traffic).	______	______
i. Narcotics control	______	______
j. Vice control	______	______
k. Intelligence/organized crime control	______	______
l. General investigative functions	______	______
m. Crime laboratory functions	______	______
n. Community relations/services functions	______	______
o. School liaison functions	______	______
p. Juvenile enforcement functions	______	______
q. Communications/dispatching functions	______	______
r. Records systems/data processing	______	______
s. General secretarial/clerical functions	______	______
t. Maintenance	______	______
u. Other (SPECIFY) ______________________ .	______	______
Total	______	______

10. Please give the number of full-time personnel, both sworn and unsworn in your department, as of July 1, 1975, for each of the following sex and race distributions. (TOTALS IN EACH CATEGORY SHOULD EQUAL THE NUMBERS GIVEN IN QUESTION 8)

	Male White	Male Non-White	Female White	Female Non-White	Totals
a. Top Administration/Top Management					
b. General Command/Middle Level Management					
c. First Line Supervisory . .					
d. First Line Law Enforcement Officers					
e. Professional & Technical Civilian Personnel					
f. Other Civilian Personnel/ Support Personnel					
g. All others					
				Grand Total	

11. How many personnel positions within your department have been created with funds from the Committee on Law and Order (LEAA) since Jan. 1, 1969?

(Number) ____________________

12. Of these positions, please give the numbers which have been continued, have been dropped and which are presently funded by Law and Order (LEAA) as indicated below. (THE TOTAL SHOULD EQUAL THE TOTAL SHOWN IN QUESTION 11)

	Number
a. Already continued with state funds	
b. Dropped when Law and Order funds stopped .	
c. Presently funded with Law and Order funds.	
Total	

Salaries

13. What is the authorized annual salary range for full-time sworn positions in your department in the following categories?

	Lowest Salary	Highest Salary
a. Top Administration/Top Management	____________	____________
b. General Command/Middle Level Management	____________	____________
c. First Line Supervisory	____________	____________
d. First Line Law Enforcement Officers	____________	____________

14 How many full-time sworn personnel in your department were in the following salary ranges as of July 1, 1975? (TOTAL SHOULD BE THE SAME AS QUESTION 3a)

	Number
a. $6,000 up to (but not including) $6,500 . . .	__________
b. $6,500 up to $7,000 . .	__________
c. $7,000 up to $8,000 . .	__________
d. $8,000 up to $9,000 . .	__________
e. $9,000 up to $10,000 . .	__________
f. $10,000 up to $12,000 .	__________
g. $12,000 up to $15,000 .	__________
h. $15,000 up to $20,000 .	__________
i. $20,000 and over	__________
Total	__________

Education

15. How many full-time sworn personnel in your department as of July 1, 1975 had completed the following levels of education? (THE GRAND TOTAL SHOULD EQUAL THE NUMBER GIVEN IN "a" OF QUESTION 3)

	Less Than High School	High School or GED	Some College No Degree	AA, AS Degree	BA, BS Degree	Grad. Degree	Totals
a. Top admin./Top management . .							
b. General command/ Middle level management . .							
c. First line supervisory .							
d. First line law enforcement officers . . .							
e. Any others (SPECIFY) ____________.							
						Grand Total	

16. How many full-time sworn personnel in your department are now enrolled in an education or college program?

	GED	Two Year Degree	Four Year Degree	Graduate Degree
a. Top admin./Top management . . .				
b. Gen. command/Mid. level mgmt. .				
c. First line supervisory				
d. First line law enforcement officers				
e. Any others (SPECIFY) ________				

Training

17. Give the number of full-time sworn officers in your department who received formal in-service (not OJT or basic) training in the last fiscal year - July 1, 1974 to June 30, 1975. (PLEASE BE SURE TO ENTER IN THE FIRST COLUMN THE NUMBER, IN EACH CATEGORY, WHO RECEIVED NO IN-SERVICE TRAINING DURING THE LAST FISCAL YEAR.)

	Received No In-Service Training	1-16 Hours	17-39 Hours	40 Hours or More
a. Top administration/Top management	________	____	____	______
b. General command/Middle level management	________	____	____	______
c. First line supervisory . .	________	____	____	______
d. First line law enforcement officers	________	____	____	______
e. Any others	________	____	____	______

Entry Requirements

18. Does your department use any of the following entry requirements for sworn personnel? (CIRCLE ONE NUMBER ON EACH LINE)

	Yes	No
a. Age (over age 20)	1	2
b. Height - Minimum requirement	1	2
c. Height - Maximum restriction	1	2
d. Weight - Minimum requirement	1	2
e. Weight - Maximum restriction	1	2
f. Eyesight	1	2
g. Written test (other than ESC test) . .	1	2
h. Psychological exam	1	2
i. Polygraph	1	2
j. Other (SPECIFY) ____________________ .	1	2

19. What is the minimum education your department requires of new recruits?

High school diploma or GED 1

Some college, but no degree 2

AA or AS degree 3

BA or BS degree 4

Other (SPECIFY) ________________ . 5

No minimum required 6

20. Does your department utilize a policy under which personnel can move from another law enforcement agency to yours without loss of rank?

Yes . . . 1

No . . . 2

Departmental Activities Section

21. How many non-traffic investigations did your department conduct during calendar year 1974 (January 1, 1974 - December 31, 1974)?

(Number of Investigations) ____________________

22. How many traffic investigations did your department conduct during calendar year 1974?

(Number of Non-traffic Related Investigations) ______________

23. How many drug investigations did your department conduct during that year?

(Number) __________________

24. Of the drug investigations, how many resulted in drug arrests for felony or misdemeanor?

	Number
a. Felonies	______
b. Misdemeanors	_____

IF ANY OF THE DRUG ARRESTS WERE FELONIES, PLEASE ANSWER QUESTION 25. OTHERWISE SKIP TO QUESTION 26.

25. How many of the felony arrests resulted in conviction?

(Number) ______________________

26. What amounts of the following drugs were seized during calendar year 1974? (IF YOU DID NOT KEEP RECORDS ON SEIZURES OF DRUGS PLEASE MARK "NA" FOR EACH ITEM.)

Amount

a. Narcotics (opium, heroin) ______ gms.

b. Depressants (barbituates, methaqualone, etc.) . . . ______ units

Stimulants

c. Cocaine . . . . ______ gms.

d. Amphetamines . . . . . . ______ units

e. Hallucinogens (LSD, mescaline, MDA, PCP). . . ______ units

Cannabis

f. Marijuana . . . . ______ gms.

g. Hashish . . . . ______ gms.

h. Other (SPECIFY) __________ ______

(NOTE: 1 oz = approximately 31 grams -- if your records are in ounces and/or pounds, please convert into grams.)

27. Does your department analyze Reported Crime data for the purpose of manpower allocation?

Yes . . . 1

No . . . 2

Equipment & Facilities Section

28. How many automobiles or other four wheel vehicles did your department have as of July 1, 1975?

(Number) ______________________

29. Please indicate whether your department utilized the services of the following crime laboratories.

	Yes Often	Yes Seldom	No Never
a. Federal Bureau of Investigation	1	2	3
b. State Bureau of Investigation .	1	2	3
c. Other (SPECIFY) ____________.	1	2	3

30. What is the average turn-around time in days required to get results from each of the laboratories? "Turn around time" is defined as the time from mailing or submission of the evidence to the laboratory to the time of return of the laboratory report to your department. (IF YOU NEVER USE ONE OR MORE OF THE LABORATORIES PLACE A ZERO IN THE MATCHING "NUMBER OF DAYS" COLUMN. DO NOT LEAVE ANY LINE BLANK.)

	Number of Days
a. Federal Bureau of Investigation .	____________
b. State Bureau of Investigation . .	____________
c. Other (SPECIFY) ______________.	____________

31. Do you have any of the following types of record-keeping equipment?

	Yes	No
a. File cabinet(s)	1	2
b. Mechanical rotary file	1	2
c. Microfilming system without automatic retrieval	1	2
d. Microfilming system with automatic retrieval	1	2

32. This is to certify that the information included within this data instrument is accurate to the best of my knowledge and belief, and is appropriate for use in THE LAW ENFORCEMENT DATA MANUAL.

____
Official Authorized to Complete
This Data Instrument

THANK YOU FOR YOUR ASSISTANCE

ADDENDUM E

Adult Corrections Questionnaire

List of Suggested Items for Employees' Survey

Sept.-Oct., 1975

ID ____________

ADULT CORRECTIONS QUESTIONNAIRE

Name of Person Filling Out this Questionnaire:

____

Position: ______________________________________

State Agency: __________________________________

Address: _______________________________________

Telephone Number: ______________________________

GENERAL INSTRUCTIONS

1. PLEASE RETURN THIS DATA INSTRUMENT WITHIN 14 (FOURTEEN) WORKING DAYS TO YOUR DIVISION DIRECTOR. A SELF-ADDRESSED ENVELOPE IS ENCLOSED.

2. Please note that this questionnaire is designed to be used by different institutions, geographic area units and branches. We have used the term "unit" throughout, which is meant to apply to all. Please answer in terms of your institution/area/branch.

3. This data instrument is for the purpose of compiling statewide information on criminal justice agencies. These data will be particularly useful in planning. Please answer questions carefully. Your response will be considered an official report of your unit.

4. This questionnaire has been designed for FAST COMPLETION. Most questions can be answered by:
    a. Circling a code number opposite an answer, not the answer itself.
       Example: Yes . . . 1
       No . . . ②
    b. Writing a number on a line (Example: __15__).
    c. Entering a code on a line:
       __0__ for "None" or "Not Applicable"
       __NA__ for "Information Not Available"

5. Please answer every question. If an item is really not available or does not exist, you should reply with one of the codes listed in 4-c above. THERE SHOULD BE NO BLANKS LEFT FOR ANY QUESTION UNLESS THERE ARE SPECIFIC INSTRUCTIONS WITHIN THE QUESTIONNAIRE TO SKIP CERTAIN QUESTIONS.

6. Please ignore the numbers in the margin of each page. These are card and column indicators to be used in data processing.

7. If you do not understand what a question means, or you do not know how to answer it, please call your section chief, or Alex Almasy, the Adult Correction Programs Chief, Law and Order Section, North Carolina Department of Natural and Economic Resources in Raleigh. (919/829-7974)

Sept.-Oct., 1975 ID ____________

Many of the questions in this questionnaire deal with position categories of personnel as defined below. In the questions referring to "Professional and Line" personnel, all categories with an asterisk should be included. "Support" means only personnel employed in positions in clerical, maintenance, farm, food services, and like activities. PLEASE REFER BACK TO THESE DEFINITIONS IF NECESSARY IN ANSWERING QUESTIONS IN WHICH POSITION CATEGORIES APPEAR.

*Top Administration/Top Management - Area Administrators, Correctional Administrators, Superintendants, Asst. or Deputy Superintendants, Unit Commanders, Branch Managers, Asst. Branch Managers.

*Command/Middle Level Management - Majors, captains, lieutenants.

*First Line Supervisory - Sergeants, probation/parole officers III, case worker supervisors.

*First Line Staff - Custodial personnel below rank of sergeant, probation/parole officers II & I, pre-release and after-care counselors, counselors, case analysts, case workers.

*Professional & Technical Civilian Personnel - Psychologists, psychiatrists, medical doctors, nurses, teachers, vocational trainers.

General Support Personnel - Clerical, plant and maintenance, food services, farm, storeroom, etc.

All Others - Prison industries personnel (not including inmates), etc.

Personnel Profile

1. What is the total number of full-time personnel positions that are authorized in your unit budget during fiscal year 1975-76?

Number

a. Professional & Line __________

b. Support (clerical, maintenance, etc.) __________

Total __________

2. How many of these were new positions authorized as of July 1, 1975?

Number

a. Professional & Line __________

b. Support (clerical, maintenance, etc.) __________

Total __________

3. What was the total number of full-time personnel actually employed in your unit as of July 1, 1975? (Please include full-time contractual persons.)

Number

a. Professional & Line __________

b. Support (clerical, maintenance, etc.) __________

Total __________

4. What was the total number of part-time paid personnel, including contract personnel, actually employed by your unit as of July 1, 1975?

Number

a. Professional & Line ______

b. Support (clerical, maintenance, etc.) ______

Total ______

5. Please indicate below the number of part-time unpaid personnel in your unit as of July 1, 1975.

Number

a. Professional & Line ______

b. Support (clerical, maintenance, etc.) ______

Total ______

6. How many full-time professional and line personnel in your unit were separated during fiscal year 1974-75 for the following reasons: (AS APPEAR IN YOUR RECORDS)

Number

a. Death . . . . . ______

b. Resignation . . ______

c. Retirement . . ______

d. Dismissal . . . ______

e. Other (SPECIFY)

______________. ______

Total ______

7. Please indicate the length of service in the criminal justice system of full-time professional and line personnel in your unit as of July 1, 1975. (THE TOTAL GIVEN HERE SHOULD BE THE SAME AS THE NUMBER IN QUESTION 3a.)

Number of Personnel

a. Less than 6 months . . . . ______________

b. 6 months up to (but not including) 1 year . . . . ______________

c. 1 year up to 3 years . . . . ______________

d. 3 years up to 5 years . . . . ______________

e. 5 years up to 10 years . . . . ______________

f. 10 years up to 15 years . . . . . . ______________

g. 15 years up to 25 years . . . . . . ______________

h. 25 years and over . . . . ______________

Total ______________

8. Please give the number of full-time professional and line personnel in your unit as of July 1, 1975, whose ages fall within the following ranges: (AGAIN, THE TOTAL SHOULD BE THE SAME AS THAT IN QUESTION 3a)

Number of Personnel

a. Under 25 years of age . . . . ____________________

b. Twenty-five up to (but not including) 30 years of age . . . ____________________

c. Thirty up to 40 years of age . . ____________________

d. Forty up to 50 years of age . . . ____________________

e. Fifty up to 60 years of age . . . ____________________

f. Sixty up to 65 years of age . . . ____________________

g. Sixty-five and over . . . . ____________________

Total: ____________________

9. How was your total full-time personnel, including contractual personnel, distributed within the position categories as of July 1, 1975? (THE TOTAL SHOULD BE THE SAME AS THE TOTAL IN QUESTION 3. REFER BACK TO PAGE 1, IF NECESSARY FOR LIST OF POSITIONS TO BE INCLUDED IN EACH CATEGORY.)

Number

a. Top administration/top management . . . . . . ________

b. Command/middle level management . . . . . . ________

c. First line supervisory . . . . ________

d. First line staff . . . . ________

e. Professional & technical civilian personnel ________

f. General support personnel . . . . ________

g. All others . . . . ________

Total ________

10. How was your total number of part-time paid personnel, including contract personnel, distributed within the position categories as of July 1, 1975? (THE TOTAL SHOULD BE THE SAME AS THE TOTAL IN QUESTION 4)

Number

a. Top administration/top management . . . . . . ________

b. Command/middle level management . . . . ________

c. First line supervisory . . . . ________

d. First line staff . . . . ________

e. Professionsl & technical civilian personnel . ________

f. General support personnel . . . . ________

g. All others . . . . ________

Total ________

11. Now, please give the number of paid personnel (both full and part time) in your unit assigned specifically to duty positions performing the following functions: (INCLUDE HERE ALL PAID PERSONNEL INCLUDING CONTRACTUAL PERSONNEL, IN THE FUNCTION IN WHICH THEY SPEND 50% -- OR MOST -- OF THEIR TIME. DO NOT COUNT ANY INDIVIDUAL MORE THAN ONCE. PLEASE PUT A ZERO ("0") ON ANY LINE IN WHICH YOU HAVE NO PERSONNEL PERFORMING THAT FUNCTION. THE OVERALL TOTALS FOR "FULL TIME" AND "PART TIME" ALTHOUGH TALLIED DIFFERENTLY, SHOULD AGREE WITH THOSE IN QUESTION 9 AND 10.)

	Number of Persons	
	Full Time	Part Time
a. Top administrative functions		
b. Other administrative functions		
c. Staff supervisory functions		
d. Planning/research functions		
e. Staff training functions		
f. Case work functions		
g. Custodial functions (security)		
h. Pre-sentence investigation		
i. Work/study release investigation . . .		
j. Parole investigation		
k. Classification functions		
l. Mental health services		
m. Medical services		
n. Academic services		
o. Vocational services		
p. Volunteer coordination functions . . .		
q. Absconder/escapee apprehension		
r. Collection of court-ordered monies . . .		
s. Records keeping		
t. General clerical, secretarial		
u. Telecommunication functions		
v. Maintenance functions		
w. Transportation functions		
x. Prison industries functions		
y. Other (SPECIFY) ____________ .		
Totals		

12. Please give the number of full-time personnel in your unit, as of July 1, 1975, for each of the following sex and race distributions. (AGAIN, THE GRAND TOTAL SHOULD EQUAL THE TOTAL GIVEN IN QUESTION 3)

	Male White	Male Non-White	Female White	Female Non-White	Totals
a. Top admin./top management . .					
b. Command/mid. level mgmt. . .					
c. First line supervisory . . .					
d. First line staff					
e. Prof. & tech. civ. personnel.					
f. General support personnel . .					
g. All others					
			Grand Total		

13. How many new personnel positions within your unit have been created with funds from the Committee on Law and Order (LEAA) since Jan. 1, 1969?

(Number) ____________________

14. Of these positions, please give the numbers which have been continued, have been dropped and which are presently funded by Law and Order (LEAA) as indicated below. (THE TOTAL SHOULD EQUAL THE TOTAL SHOWN IN QUESTION 13)

	Number
a. Already continued with state, county or city funds	
b. Dropped when Law and Order (LEAA) funds stopped	
c. Presently funded with Law and Order (LEAA) funds	
Total	

Salaries

15. What is the authorized annual salary range for the following full-time positions in your unit?

	Lowest Salary	Highest Salary
a. Correctional Administrators, Superintendents, Branch Managers		
b. Asst. Correctional Administrators, Asst. Superintendents, Asst. Branch Managers		
c. Captains		
d. Lieutenants		
e. Sergeants, Probation/Parole Officers III		
f. Probation/Parole Officers I/ Correctional Officers		

16. How many full-time professional and line personnel in your unit were in the following salary ranges as of July 1, 1975? (THE TOTAL SHOULD EQUAL THE NUMBER IN QUESTION 3a)

	Number
a. $6,000 up to (but not including) $6,500 . . .	
b. $6,500 up to $7,000 . .	
c. $7,000 up to $8,000 . .	
d. $8,000 up to $9,000 . .	
e. $9,000 up to $10,000 . .	
f. $10,000 up to $12,000 .	
g. $12,000 up to $15,000 .	
h. $15,000 up to $20,000 .	
i. $20,000 and over	
Total	

Education

17. How many full-time professional and line personnel in your unit as of July 1, 1975 had completed the following levels of education? (THE GRAND TOTAL SHOULD EQUAL THE NUMBER GIVEN IN QUESTION 3a)

	Less Than High School	High School or GED	Some College No Degree	AA,AS Degree	BA,BS Degree	Grad. Degree	Totals
a. Top admin./top management . . .							
b. Command/mid. level management . . .							
c. First line sup. .							
d. First line staff.							
e. Prof. & tech. civ. personnel .							
					Grand Total		

18. How many full-time professional & line employees in your unit are now enrolled in an education or college program?

	GED	Two Year Degree	Four Year Degree	Graduate Degree
a. Top admin./top management . . .				
b. Command/mid. level management .				
c. First line supervisory				
d. First line staff				
e. Professional & technical civilian personnel				

19. Please give the number of paid full-time personnel in the following categories in your unit who received formal in-service training (NOT OJT OR BASIC) in the last fiscal year - July 1, 1974 to June 30, 1975. (BE SURE TO INCLUDE THE NUMBER WHO RECEIVED NO IN-SERVICE TRAINING IN THE FIRST COLUMN.)

	Received No In-service Training	1-16 Hours	17-39 Hours	40 hours or more
a. Top admin./top management . .				
b. Command/mid. level management				
c. First line supervisory . . .				
d. First line staff				
e. Professional & technical civilian personnel				
f. General support personnel . .				
g. All others				

20. Do you employ ex-offenders within your unit?

Yes . . . 1

No . . . 2

21. How many ex-offenders were employed as of July 1, 1975?

(Number) ____________________

22. This is to certify that the information included within this data instrument is accurate to the best of my knowledge and belief and is appropriate for use in publications showing data pertaining to the criminal justice system in North Carolina.

____

Official Authorized to
Complete This Data
Instrument

THANK YOU FOR YOUR ASSISTANCE

DATA ITEMS - EMPLOYEE SURVEY

1. Employee

   A. Personal

      1. Age
      2. Sex
      3. Race or ethnicity

   B. Work History - Non-CJ

      1. Military experience (military police, only)
      2. Date started last non LE/CJ position
      3. Annual salary for last non LE/CJ position
      4. Occupation of last non LE/CJ position
      5. Number of years in last full-time LE/CJ position

   C. Work History - CJ

      1. Total years worked in LE/CJ system
      2. Total years worked for current agency
      3. Date started first LE/CJ position
      4. Date ended first LE/CJ position
      5. PT/FT first LE/CJ position
      6. Weekly salary for first LE/CJ position
      7. Task checklist for first LE/CJ position
      8. Occupation first LE/CJ position
      9. Date started last position prior to current one
      10. Date ended last position prior to current
      11. Weekly salary for immediately prior position
      12. PT/FT for immediate prior position
      13. Occupation last position prior to currrent one (occupations to be specified)
      14. Task checklist for immediate prior position (checklist to be specified)

   D. Current Position - Descriptive

      1. Work activities (checklist attached)
      2. Total years worked in current position
      3. Position title - current position
      4. Current occupation as classified in NMS occupation classification scheme
      5. Current PT/FT employment classification
      6. Number of persons supervised in current position
      7. Salary or wages (gross) for last pay period
      8. Actual number of hours on the job during last pay period
      9. Overtime hours worked last pay period
      10. Overtime pay last pay period

11. Sworn/not sworn status
12. Authorization to carry a gun
13. Presence of second job
14. Hours earnings on second job

E. Current Position - Attitudes and Opinions

1. Checklist of factors most liked and disliked about current job.
2. Most desired change in current employment (own job - checklist)
3. Expectation of continuing in current agency for entire career
4. Attitude toward standards and goals and other innovation battery for individual employee, including agency spokesman, or agency position.
5. Relevance of formal education for selection to current position

F. Training & Education - Non-LEEP-Specific

1. Years of schooling completed
2. Highest degree completed prior to LE/CJ employment
   a. 1-year certification
   b. AA
   c. BA/BS
   d. MA/MS
   e. Ph.D.
   f. Law degree
3. Major field in which highest degree was completed prior to CJ employment
4. How highest degree was financed prior to CJ employment (checklist)
5. Highest degree earned since initial LE/CJ employment
6. Major area in which highest degree since LE/CJ employment was earned
7. How highest degree since LE/CJ employment was financed (checklist)
8. Type of on-the-job training received
9. Special skills checklist (to be specified)
10. How special skills were acquired (checklist)
11. Other specialized training/education since joining current agency (checklist)
12. Length of other specialized training/education activity since joining current agency
13. How each specialized training/education was funded (checklist)
14. Nature of current education or training (to be specified)

G. LEEP

1. Number of LEEP-supported credit hours earned
2. Amount of academic credit received for academy training
3. Adequacy of LEEP assistance
4. Benefits from LEEP participation (checklist)
5. Needed changes in LEEP courses (checklist)
6. Satisfaction with LEEP priorities for assistance

7. Type of LEEP program enrolled in
    a. pre-service
    b. in-service
8. Amount of LEEP funds received as grant
9. Amount of LEEP funds received as loan
10. Checklist of other sources of funding for LEEP program & amount for each type
11. Percent of LEEP education received on agency time

ADDENDUM F

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